

# **Technology Adoption and Diffusion in the South African Online Video Industry: A Technopreneurial Analysis**

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## **ABSTRACT**

over the past few years the South African market has seen the launch of a number of online video services providers. The leading providers in the industry are Vidi, ON-Tap, MTN front row and ShowMax. The industry has also attracted some international competition with big players like Netflix launching its services in the South African market in January 2016. Although this industry has seen the emergence of many new players, it is still in its infancy stages in South Africa and is still to be seen if it will mature into a long term profit making industry.

It is important to research the diffusion of innovation and more specially to look at how technopreneurs that are in this field or considering entering this industry can influence the speed and success of how this new innovation is diffused. This research will focus on two areas. Firstly, it will seek to look at the factors that influence the potential adopter's propensity to adopt a new product. Secondly the research will look at the role played by the technopreneur in ensuring that online video services are adopted successfully.

Since the online video services industry is not yet mature the research was conducted using the mixed method approach. The quantitative research was conducted by distributing online survey questionnaires. These questionnaires were distributed using email, as well as social media networks such as Facebook, Twitter and LinkedIn. The qualitative research was conducted by performing interviews with a predetermined list of respondents. The combination of the two types of research led to a better understanding of this topic.

The results the research highlighted the fact that the South African market poses very unique challenges for entrepreneurs that want to enter this industry. South African technopreneurs have an advantage against international players like Netflix because they understand challenges of internet access, payment issues as well as preferred content.

## DECLARATION

I, \_\_\_\_\_, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

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Signed at .....

On the ..... day of ..... 2008

## **DEDICATION**

To the all mighty who has granted me the strength and Grace to to this masters.

To my parents who have been my greatest supporters.

## **ACKNOWLEDGEMENTS**

I would like to firstly thank my supervisor, Dr Diran Soumounni, for his supervision, guidance and constructive feedback. He has given me tremendous support and was a great source of knowledge.

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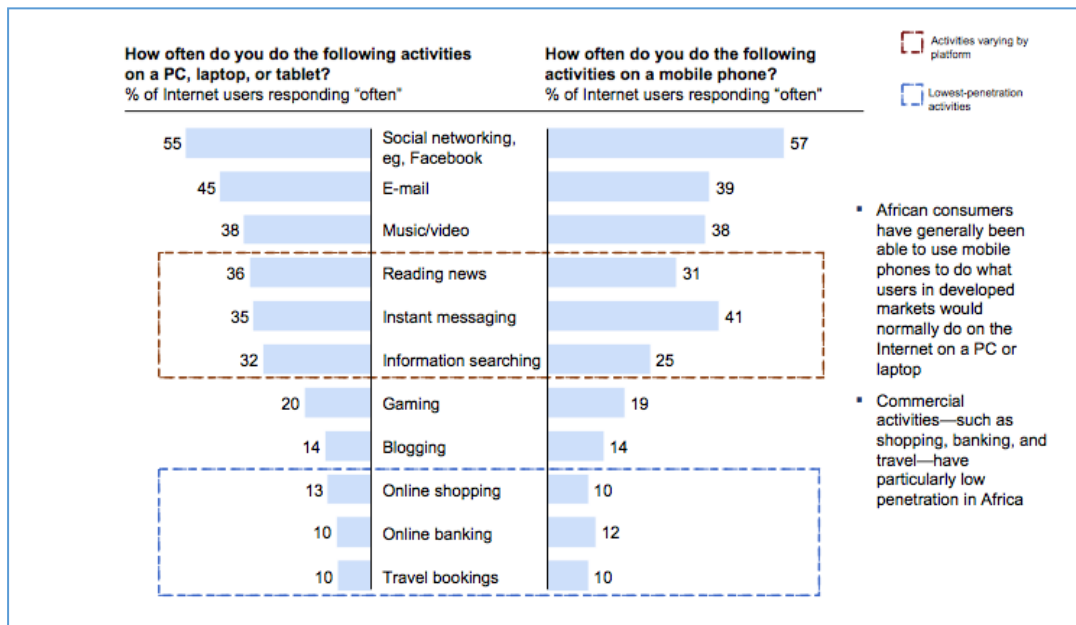
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# **CHAPTER 1: INTRODUCTION**

## **1.1 The state of the South African media industry**

Globally, the media industry has been evolving. Consumers are increasingly abandoning traditional media and migrating to their digital equivalents. This has meant that traditional media owners cannot derive the same value for advertisers because advertisers need large audiences to derive value (Windeck, 2009).

According to McKinsey and Company (2012) television remains the most frequently used and trusted source of information in Africa. Africa's large and fast growing population coupled with the rise in consumer disposable income offers firms massive opportunities. The figure below demonstrates how urban Africans spend over ten hours a week on the Internet. They use the internet in the same way as those in the industrialised world with social networking, sending emails, watching videos and listening to music being the most popular uses of the internet in descending order. However, most African users cite low bandwidth instead of rising cost as their major barrier to increased Internet usage (McKinsey and Company, 2012).



**Figure 1 Internet usage in Africa (McKinsey and Company, 2012)**

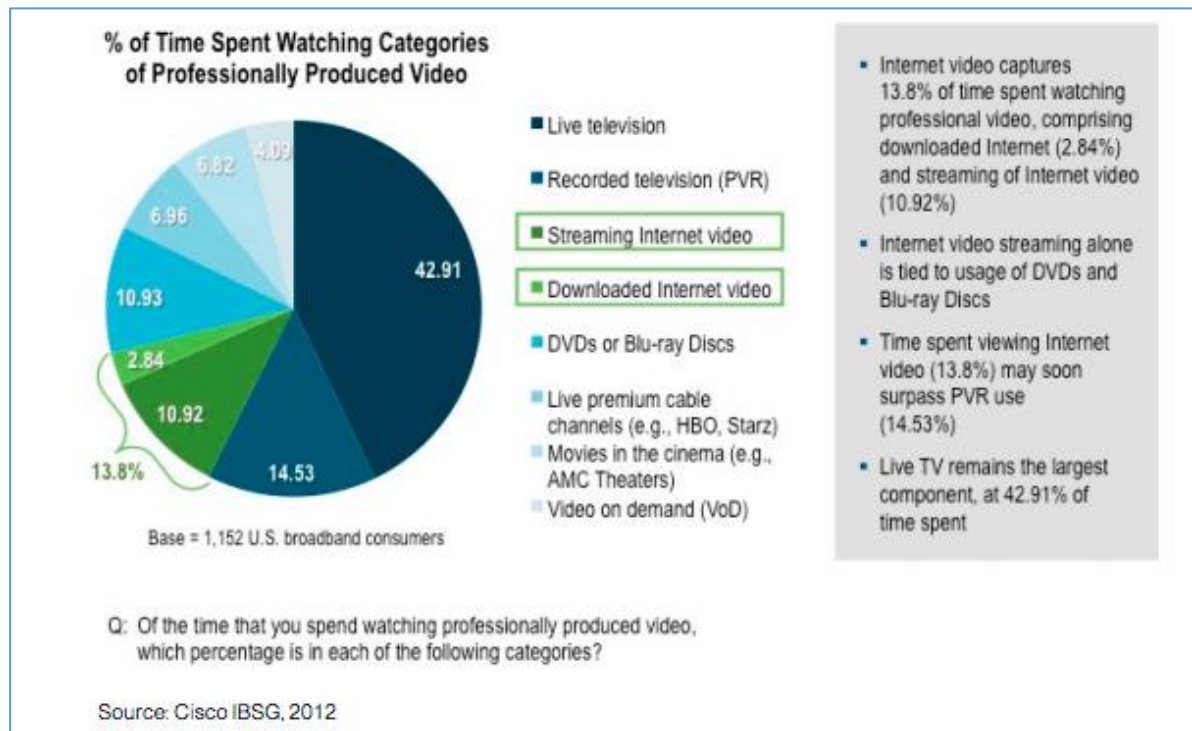
Consumers worldwide have embraced smartphones, laptops, tablets and other types of wireless devices. This has led to consumers assuming an anytime, anywhere, any device mind-set, which has led to an expectation by consumers that they should be able to consume content from these multiple devices on demand (Gimpel, 2013).

The barriers to entry in the video market have been lowered which enables small entrants to enter the market. Media start-ups are now able to bypass processes that were formally controlled by traditional gatekeepers (Gimpel, 2013). Long-standing media business models are being broken up. This is because of digitalisation which has detached the link between content and physical formats like television (Windeck, 2009).

South African online video services have mostly failed to entice large amounts of subscribers although this technology is developing at an extremely rapid rate with new players aiming to attract subscribers. The delivery of video content is slowly moving from the traditional analog television to digital platforms, and this change is creating new revenue opportunities for new technopreneurs (Lourie, 2015).

Figure 2 below depicts how viewers in the United States consume their video content, currently they spend more time watching online videos than they do watching DVD's or Blue-Ray Discs. Also the time they spend watching online content, is more than three times greater than the time they dedicate to watching traditional VoD content from cable, or satellite services providers (Datta, Kumar, Izdebski, & Suh, 2012).





**Figure 2 Time spent viewing video categories (Datta, Kumar, Izdebski, & Suh, 2012)**

## 1.2 The south African video on demand industry

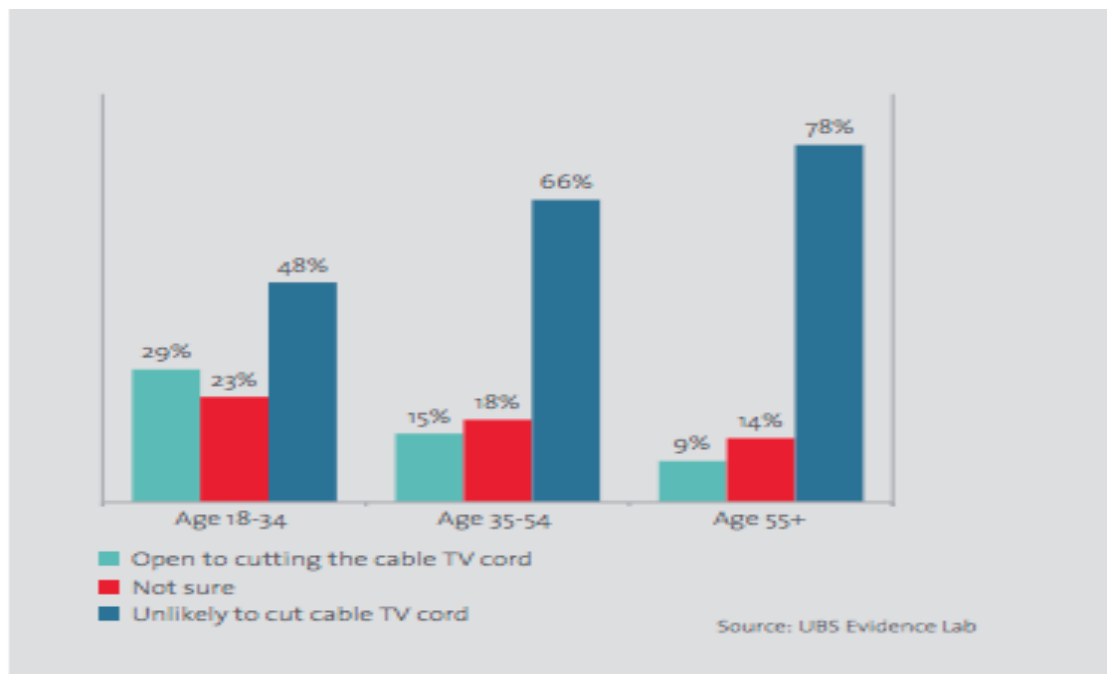
According to Kagiso Asset Management, (2015) Video on demand services will account for approximately 3% of the global pay television market by the end of 2015. This gives an indication that online video services have a very positive growth potential.

The graph below illustrates how unlike older generations, young people prefer the instant gratification of Video on Demand services and are more likely to substitute Pay TV services with Video On Demand services. The instant availability of movies and TV series has altered the behaviour of viewers, with more viewers choosing to follow content not networks (Kagiso Asset Management, 2015).

Although the South African video on demand services market still remains nascent, there has been significant growth over the past couple of years. In September 2014 the Times Media Group launched VIDI, this was the first online streaming service with a subscription cost of R149. Following that, Altech launched the Node which was a Set Top Box, which cost R1999, the Node was attractive because it was not bandwidth dependent and therefore did not consume data. However, in 2015 the Node was discontinued citing poor take up as the reason for suspending the product (PricewaterhouseCoopers, 2015).

**Figure 3 Openness to cutting the cable cord (Kagiso Asset Management, 2015)**

In October 2014 MTN announced that they will be partnering with Discover



Digital a South African group to launch a new Video on Demand service. Consequently, in March 2015 MTN launched MTN FrontRow with a subscription of R179 per month. Following that, in August 2015 Naspers launched ShowMax

at a cost of R99 per month (PricewaterhouseCoopers, 2015). In December 2015 MTN rebranded their service to VU and reduced their price to R99 (McLeod , 2015). Furthermore, in January 2016 Netflix launched in 130 countries including South Africa (Vermeulen, 2016).

**Table 1 Key Competitors in the online video services industry (Vermeulen, 2016)**

Service	Provider	Cost Per Month	Content	Platforms
<b>Netflix US</b>	Netflix	<ul style="list-style-type: none"> <li>• R128 (\$7.99 – Basic)</li> <li>• R160 (\$9.99 – Standard)</li> <li>• R192 (\$11.99 – Premium)</li> <li>• +R79 for unblocker (\$4.95)</li> </ul>	<ul style="list-style-type: none"> <li>• ±7,000 titles</li> </ul>	<ul style="list-style-type: none"> <li>• All suitable devices</li> </ul>
<b>Netflix ZA</b>	Netflix	<ul style="list-style-type: none"> <li>• R128 (\$7.99 – Basic)</li> <li>• R160 (\$9.99 – Standard)</li> <li>• R192 (\$11.99 – Premium)</li> </ul>	<ul style="list-style-type: none"> <li>• ±730 titles</li> <li>• 231 TV shows</li> <li>• ±500 Movies</li> </ul>	<ul style="list-style-type: none"> <li>• All suitable devices</li> </ul>
<b>ShowMax</b>	Naspers	R99	<ul style="list-style-type: none"> <li>• ±1000 titles</li> <li>• 20,000+ episodes across ±400 shows</li> <li>• 400 Hollywood and British movies</li> <li>• 200 local movies and TV series</li> </ul>	<ul style="list-style-type: none"> <li>• Samsung TVs 2012+</li> <li>• LG TVs 2012+</li> <li>• Windows</li> <li>• Mac</li> <li>• Android</li> <li>• iOS</li> </ul>
<b>OntapTV</b>	PCCW Global	R89	<ul style="list-style-type: none"> <li>• ±430 titles</li> <li>• ±4,500 episodes</li> <li>• 291 movies (162 SVOD, 129 TVOD)</li> </ul>	<ul style="list-style-type: none"> <li>• Windows</li> <li>• Mac</li> <li>• Android</li> <li>• iOS</li> </ul>
<b>Vidi</b>	Times Media	R99	<ul style="list-style-type: none"> <li>• 2,500+ episodes</li> <li>• 170+ movies (±100 SVOD, ±70 TVOD)</li> </ul>	<ul style="list-style-type: none"> <li>• Samsung TVs 2013+</li> <li>• Windows</li> <li>• Mac</li> <li>• Android</li> <li>• iOS</li> </ul>
<b>VU</b>	MTN	R99 (Includes free streaming for MTN customers.	<ul style="list-style-type: none"> <li>• 829 titles</li> <li>• 2,981 episodes across 97 series</li> <li>• 732 movies (241 SVOD and 491 TVOD)</li> </ul>	<ul style="list-style-type: none"> <li>• Windows</li> <li>• Mac</li> <li>• Android</li> <li>• iOS</li> </ul>

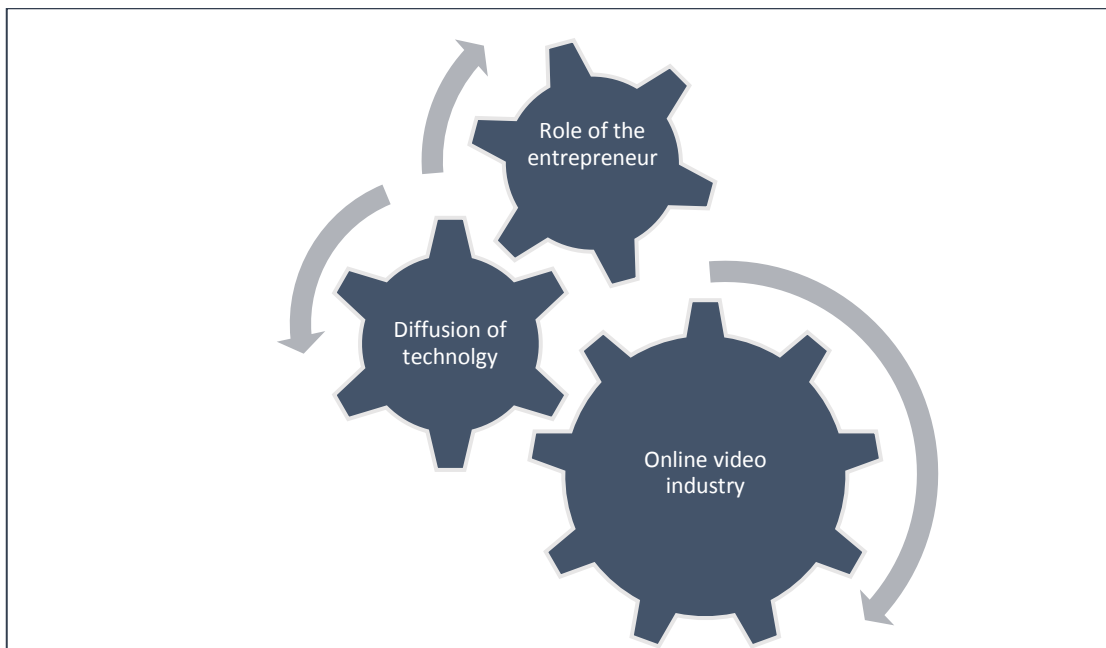
### **1.3 Theoretical background to the study**

According to Braunerhjelm, P., & Svensson, R. (2009) when entrepreneurs introduce new innovations to a market, the entrepreneur changes the prevailing equilibrium. Schumpeter's theory of economic development is divided into three stages; the first stage is the technical discovery or invention of a new product stage. The second stage is innovation stage; this includes the successful commercialising of a new product or service. The final stage involves the general adoption and diffusion of a new product in the market. Initial theories of entrepreneurship have built on to the contributions of Schumpeter, who emphasised the significance of the entrepreneur as being the most vital component of the economic development process (Block, Turik, & Zhou , 2012).

The process of adoption and diffusion of new innovations has been a popular subject of study by academics for decades. The most widespread model is by Everett Rogers, (2003) in the book titled Diffusion of innovation. This model has been used to study the adoption and diffusion of innovation in topics such as political science, public health, and economics. The diffusion of innovation theory is a popular framework in technology adoption and diffusion (Rogers, 2003).

Diffusion can be described as the process by which an innovation is introduced in a market over a period of time. Diffusion is a unique form of communication that focuses on spreading messages for products and services that are perceived to be new innovations. The four key components of the diffusion of

innovation are innovation, communication channel, time and social systems (Rogers, 2003)



**Figure 4 Key Diffusion Variables**

#### **1.4 Context of the study**

The South African telecommunications industry has an estimated 4.2-million fixed-line connections, the majority of which are through Telkom and Neotel. The increased amount of mobile phones and smartphones has increased internet usage. Manyika, et al, (2003) has estimated that in 2012 there were 8.5 million Internet users in South Africa. Most South Africans rely on their mobiles to access the Internet. In 2011, South Africa had 820,000 ADSL subscribers, compared to 5.5 million 3G users (Manyika , et al., 2013).

The South African population is weighted towards young people, with an estimated 15 million of the 52-million of the population being under the age of 15 years. These young people were born in an era of digital media and are less

likely to use traditional media such as print or traditional linear television (Print & Digital media SA , 2013).

Online video streaming services allow viewers to gain access to video content using more than one device. Changes to the availability of content, distribution agreements and multisource devices will change the video industry. The increased popularity of online video services will revolutionise programme planning, viewer behaviours and advertising strategies (Forrester Research, 2015).

On demand television as a technology is about a decade old. The first major Video on Demand trial was done in 1994, in France, by Telecom in Biarritz which lasted for 7 years. The findings of the trial were that although VOD services appealed to consumers, the cost of Fibre-to-the-home (FTTH) upgrades needed to deliver the service were a cost that neither customers and network operators did not want to carry (Deloitte, 2014).

According to Deloitte (2014) the Subscription Video On Demand market will continue to grow in markets all over the world. SVOD offerings may also disrupt established pay TV players creating a new way of viewing content.

## **1.5 Problem statement**

Many scholars in entrepreneurial theory recognise the role of the entrepreneur in the creation of new industries. However, research on the diffusion of innovation is lacking, particularly with its examining of the role of

entrepreneurship and the entrepreneur's ability to influence factors in the diffusion of innovation process (Miller & Garnsey, 2000).

#### **1.5.1 Main Problem**

There are already numerous SVOD services in the market globally. However, only a few of these services will be commercially viable in the long term. In the long run SVOD could end up being both a competition and a complement for TV services. TV broadcasters need to determine how much of a threat or partner online video services may be to television (Deloitte, 2014). The main problem for this research is to determine the role of the entrepreneur in the process diffusion of online video in South Africa.

#### **1.5.2 Sub problem 1:**

To evaluate the factors that influence the diffusion of innovation in the online video industry.

#### **1.5.3 Sub Problem 2:**

To determine the role of the technopreneur in the diffusion of online video services in South Africa.

### **1.6 The study purpose**

The purpose of this study is to investigate factors that affect the diffusion of online video services, As well as the role that the technopreneur has in ensuring that these services are diffused successfully.

### **1.6.1 Research questions**

This research report must answer the following questions:

1. What are the factors that influence the adoption of online video services in the South African market?
2. What is the role of the technopreneur in the diffusion of Online Video in South Africa?

### **1.6.2 The aims of the study are as follows:**

The shift from traditional media to digital media has been a popular subject for researchers. This research will look at academic theory that investigates how technology entrepreneurs impact the diffusion of innovation in the online video industry.

1. To examine the factors that influence the adoption of online video content in the South African market
2. To examine the role of the technopreneur as an agent in the diffusion of a technological innovation

## **1.7 Definition of terms**

Information Communication Technology (ICT): Encompasses all the technology that facilitates the processing, transfer and exchange of information and communication services

Online video content: this is video content that is delivered to the viewer using the Internet.



Video On Demand (VOD): Systems that allow viewers to watch or listen to video or audio content when they decide to, rather than to depend on broadcast time. VOD technology is usually used to bring demand content on to televisions, personal computers and mobile devices.

Subscription VOD (SVOD): is an on-demand service like Netflix, which offers users access to video content for a monthly subscription fee. Movies and TV series typically only become available on SVOD some time after they have been released on DVD.

Transactional VOD (TVOD): services such as DStv BoxOffice and iTunes lets users rent (or buy, on iTunes) videos on a per-item basis. Movies are usually available to rent on TVOD services for a limited time after they come off circuit, but before they are released on DVD.

Streaming: Vidi and Netflix are examples of streaming providers which require that users stream videos from servers over an Internet connection. While this has benefits, for South Africans, it means data costs which may need to be considered.

## **1.8 Contributions of the study**

This research study will contribute to the understanding of the South African online video services industry. Also, the research will endeavour to explain the factors that affect the diffusion of online video services in the South African context. More specifically, it will enable an improved understanding of the role

the entrepreneur in the diffusion of this particular innovation. This study will not only be valuable to academic researchers but also practitioners who are in technology related industries.

This study will especially examine Roger's theory of innovation diffusion in the context of the South African digital entertainment industry. This research will be of value to researches, practitioners, entrepreneurs and policy makers in the digital entertainment industry.

## **2 CHAPTER 2: LITERATURE REVIEW**

### **2.1 Introduction**

The purpose of this literature review is to critically explore the process of innovation diffusion and adoption. The literature will analyse Roger's theory of innovation diffusion as well as other authors who have looked at this subject. Furthermore, this literature review will seek to investigate the role of entrepreneurs in the diffusion of innovation process.

#### **2.1.1 *Background Discussion***

Diffusion can be described as a procedure by which innovative ideas are transferred through appropriate channels over a period of time within a certain social system and subsequently considered for adoption, utilisation and implementation by the society (Atkinson, 2007). An innovation is an idea, practice or object that is considered to be new to individuals or organisations in a market. Innovations are expected to advance the quality of a process, a product or a service (Nordin, Noor, & Saad , 2014).

A firm's technological competitiveness cannot only be defined by the frequency with which it is able to develop new innovations, but also more importantly, it must be defined by the extent to which they are able to commercialise their innovations (Gold, 1980). Developing countries are often latecomers in the Information Communication Technology (ICT) revolution, but if they are able to

emulate the innovation processes in developed countries, they might be able to catch up to industrialised countries (Fong, 2009)

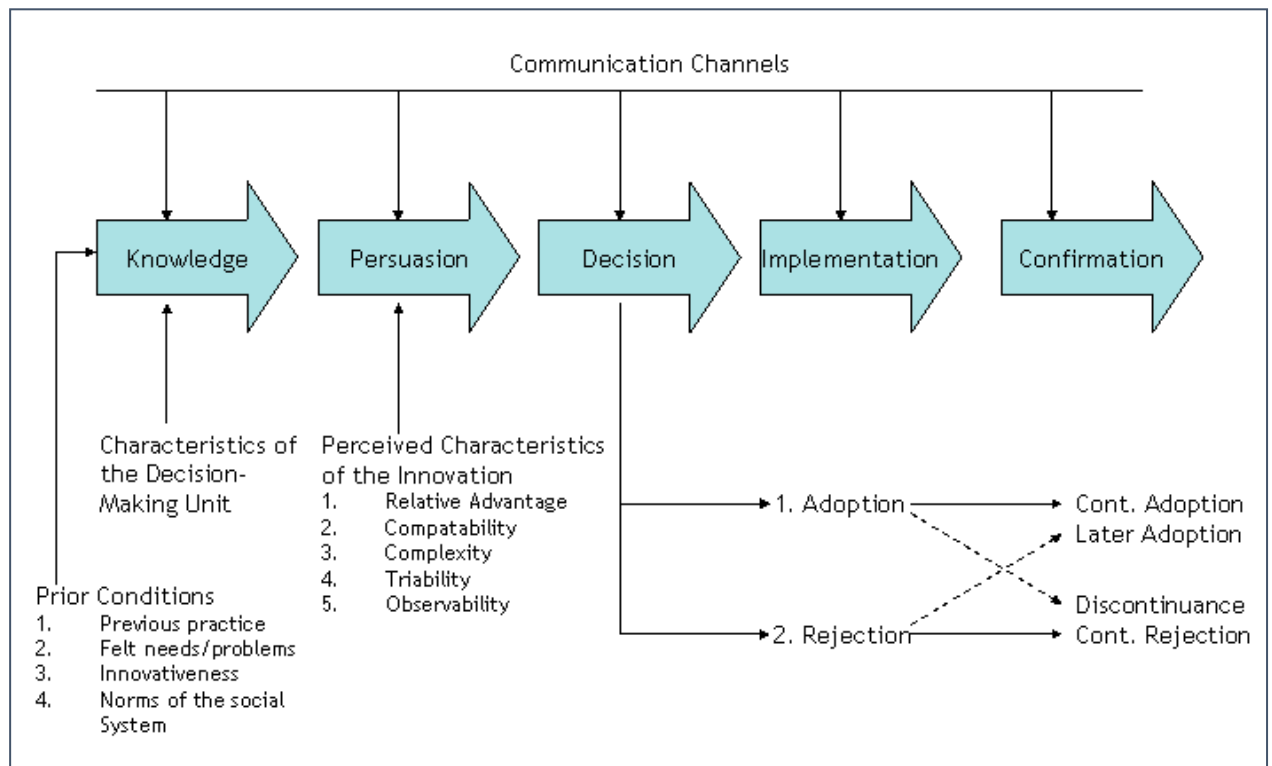
The concept of innovation refers to the process of commercialising an invention (Fagerberg, Mowery, & Nelson, 2005). The technical approach to innovation focuses strictly on technological innovations, these are likely a result of knowledge-intensive entrepreneurship. The broader approach also looks at innovation as the formation of new processes, sources of supply, and also the exploitation of new markets and development of new ways to do business (Szirma, Naude, & Goedhuys, 2011).

Many innovators believe that innovations that are deemed to be beneficial to the end users should naturally be readily accepted and diffused among relevant stakeholders. This is however, not always true. Even though an innovation may have clear benefits, it can still have a low rate of diffusion. Constructive communication between innovators and possible adopters is important for determining market prospects (Nordin, Noor, & Saad , 2014).

### **2.1.2 *Elements in the Diffusion of Innovation***

Rogers (2003) identified four elements that have the ability to reduce uncertainty in the diffusion of innovation process. The first element is innovation; this can be described as an idea or practice that is observed to be new by the society. The second element is communication channels, which can be described as a process in which individuals generate and share information with each other in order to reach a mutual understanding. The third element is

time, which is ignored in most behavioural research. Rogers (2003) argued that including time in diffusion research demonstrates one of its strengths. The fourth element is the social system, which can be described as “a set of interrelated units engaged in joint problem solving to accomplish a common goal” (Sahin, 2006).



**Figure 5: Five stages of the innovation decision process (Sahin, 2006)**

## 2.2 The innovation decision process

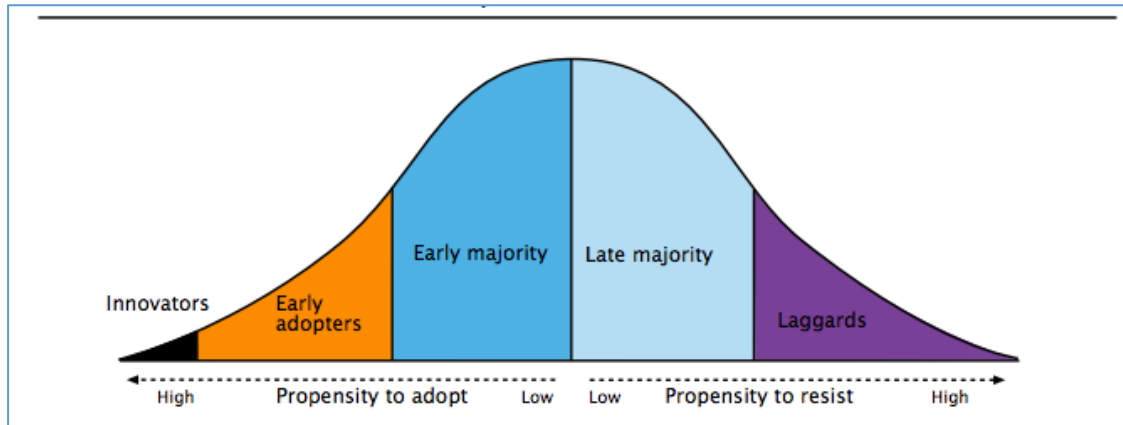
Rogers (2003) described a five-stage innovation-decision process, which includes knowledge, persuasion, decision, implementation and confirmation. The stages in this process usually precede each other in a time-ordered manner

as depicted in the Figure 4. Step 1 is the awareness stage, whereby the individual first becomes aware of the existence of the new technological innovation. The second stage is the persuasion stage, this stage occurs when the individual has formed an opinion, but they have not yet decided to accept or reject the innovation (Sahin, 2006).

The third stage is the decision stage; this is when the individual chooses to reject or adopt the new innovation. The decision stage can be made easier if the innovation has a trial. There are also some individuals who might have initially adopted the innovation and then decide to discontinue their use of the innovation (Sahin, 2006).

The fourth is the implementation stage, whereby the innovation is put into practice and where uncertainty may still be prevalent. Reinventions often happen at this stage. The final stage is the confirmation stage, whereby the individual seeks support for his or her decision. Depending on the kind of support the individual receives, late adoptions or discontinuance often occurs at this stage (Sahin, 2006).

## 2.3 Understanding the needs of different segments



**Figure 6: Five Diffusion segments (Robinson, 2012)**

Diffusion research divides the market into 5 different segments based on the markets inclination to adopt a new product. These segments are innovators, early adopters, early majority, late majority, and laggards. It is important that entrepreneurs do not aim to shift these segments, these segments should be viewed as stagnant. Innovations are able to spread successfully when they evolve to meet the needs of each segments (Robinson, 2012).

The process starts with a small number of innovators, these innovators often create new ideas and gadgets and also enjoy discussing these ideas. To appeal innovators entrepreneurial firms must identify them and make them partners of product designing process. Once the benefits of the product become apparent early adopters come in. Early adopters enjoy being fashionable and being the leader amongst their peers. To entice early adopter's entrepreneurial firms need to make them part of their trial period and then study their behaviour to discover how they can make the products more convenient and marketable (Robinson, 2012).

The early majoring are the pragmatics; they wont adopt a new product without solid proof that it works. The early majority are cost sensitive and risk averse, to entice the early majority, the entrepreneurial firm will need to use mainstream marketing and have endorsements from credible individuals or businesses (Robinson, 2012).

The late majority include those that are conservative pragmatics, they are uncomfortable with new ideas. To attract early majority, entrepreneurs need make the product convenient and reduce the cost. The last segment is the laggards, this segment views adopting new products as high risk, to attracts this segment entrepreneurial firms need to maximise their familiarity with the product, as well as make them see how other laggards have adopted the innovation (Robinson, 2012).

## **2.4 Attributes of innovation and rate of adoption**

The theory of the diffusion of innovation is perceived to be amongst one of the most dominant theories that have endeavoured to explore the elements that affect an individual's ability to adopt a new technological innovation. The diffusion of innovation theory aims to clarify how, why and at what speeds a new technology can be spread in the society (Al-Jabri & Sohail , 2012)

Some innovations are communicated and adopted at a very fast pace and others do not seem to appeal to their intended target market. The differences in how people adopt a new technology can often be explained by the difference in



how potential adopters perceive the innovation's characteristics (Atkinson , 2007).

Rogers identifies a number of characteristics that are significant in the adoption of new technology, these characteristics are relative advantage, complexity, compatibility, trialability, and observability. Researchers in this field have found these characteristics of adoption and diffusion of innovations and have reliably decided that these characteristics, especially relative advantage, complexity, and compatibility, as the commonly striking factors in the adoption of Internet and mobile technologies (Al-Jabri & Sohail , 2012).



**Figure 7: Factors that affect innovation (Al-Jabri & Sohail , 2012)**

Most studies of innovation diffusion identify five main characteristics as being; relative advantage, comparability, complexity, triability and observability as depicted in the table below (Rogers, 2003). Other studies in the diffusion of innovation have included flexibility, reservability, cost efficiency and risk (Atkinson , 2007).

**Table 2 Attributes of innovation diffusion (Atkinson , 2007)**

Attribute	Definition	Application
<b>Relative Advantage</b>	The degree to which an innovation is perceived as being better than the idea it supersedes	The benefits may be in relation to economic, social status, or other factors. Innovations that appear to be beneficial when compared to other methods, both current and previous, are more likely to be adopted.
<b>Comparability</b>	The degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters	Adoption is more likely when the innovation is consistent with the economic, sociocultural, and Philosophical value system of the adopter <sup>13</sup> and the adopter's expectations and needs. <sup>10</sup> "Positioning" techniques match the needs and values of potential adopters with the innovation to facilitate its introduction.
<b>Complexity/ Simplicity</b>	The degree to which an innovation is perceived as relatively difficult to understand and use	Innovations that are perceived as more complex are less likely to be adopted. <sup>13</sup> Complexity is the only attribute negatively related to adoption. Some researchers <sup>14</sup> have used the term simplicity so that the attributes would have the same directionality in terms of their relationship with adoption.
<b><u>Trialability</u></b>	The degree to which an innovation may be experimented with on a limited basis	Innovations that can be tried before adoption are adopted more rapidly than those that cannot, especially among those who adopt earlier relative to the majority of potential adopters. Later adopters use the experience of peers as a vicarious trial of the innovation.
<b>Observability</b>	The degree to which the results of an innovation are visible to others	When a person sees another person using a particular innovation, such as a cellular phone, the other person models how the innovation works as well as the benefits of use. One is less likely to observe the results of an innovative idea, so innovative products are more likely to be adopted than innovative ideas.

## **2.5 Hypothesis 1: Relative advantage**

The term relative advantage indicates the degree to which a new innovation is observed to be superior to its precursor (Gary & Benbasat, 2001). The social status that the innovation portrays is an element of relative advantage. Early adopters and early majority consumers value the status of the product whereas laggards perceive status as a less important attribute (Sahin, 2006).

Relative advantage depends on the perceptions of a group of users and it is measured by considering economic advantage, social prestige, convenience and satisfaction that the users can derive from a particular product (Robinson, 2012).

In past research, relative advantage has been a strong predictor for the diffusion of innovation. For instance, according to Peltier , Zhao , & Schibrowsky (2012) potential users of a technology that perceive a technology to enhance their lives, have a higher potential of adopting that technology.

The greater the perceived relative advantage for a particular group of users, the faster the adoption of new innovations. Relative advantage could be either financial or non-financial; it can be measured in financial status, social standing, comfort and pleasure terms (Dibra, 2015). There is no particular rule about what constitutes relative advantage, what makes up relative advantage depends on the perceptions and the needs of a particular group (Robinson, 2012).

***Hypothesis 1: HypothesisRelative advantage will have a positive effect on Online Video adoption***

## **2.6 Literature Review Pertaining to Hypothesis 2: Online Video Complexity**

An innovation's complexity refers to the level to which an innovation is perceived as being difficult or complicated to use (Gary & Benbasat, 2001). Complexity is negatively related to the rate of adoption for new innovations, this can be a very significant obstacle for adoption. Past research has also found complexity to be the opposite of ease of use, ease of use referring to the degree to which a new product or service is perceived to be easy to understand or operate (Al-Jabri & Sohail , 2012).

The simpler to understand an innovation is, the faster it will be adopted. If a new innovation is considered complex to understand or use, the more it will require adopters to develop new skills and will result in low adoption (Dibra, 2015).

***Hypothesis 2: Complexity will have a negative effect on Online Video adoption.***

## **2.7 Literature Review Pertaining to Hypothesis 3: Online Video Comparability**

Comparability refers to the level to which an innovation is observed to be suitable with the existing values, needs and previous experiences of potential

adopters (Gary & Benbasat, 2001). Innovations that are compatible with the needs of the consumer will reduce the level of uncertainty and the rate of adoption will increase. What the innovation is called and means should be very clear in the mind of the consumer (Sahin, 2006).

An idea that is perceived as not compatible with the predominant values and norms of a social system may not be adopted as speedily as innovations that are perceived as being compatible. For users to adopt an incompatible innovation there needs to be a prior adoption of a new value system (Rogers, 2003). If an innovation is perceived to be compatible with an individual's need, it will result in less uncertainty and increase the rate of adoption. The naming of a particular innovation is also important. This is because what an innovation is called should be meaningful to the potential adopter (Sahin, 2006).

***Hypothesis 3: Compatibility will have a positive effect on Online Video adoption***

## **2.8 Literature Review Pertaining to Hypothesis 4: Online Videos Trialability**

Trialability refers to the degree to which potential customers are able to experience or experiment with the innovation before they decide to buy the new product or service (Gary & Benbasat, 2001). The more consumers are able to try the innovation the higher the rate of adoption is likely to be. This allows innovators the ability to reinvent the new product to increase adoption. An additional significant factor is the vicarious trial that is important for late

adopters, who have already adopted the technology for feedback on the product (Rogers, 2003).

An innovation's ability to be tested is significant as it allows adopters to test the claims of a new innovation before they commit themselves. If a new innovation cannot be tested, it cannot be expected to be successful. When an innovation can be tried and tested it reduces uncertainty for potential adopters (Dibra, 2015).

***Hypothesis 4: Trialability will have a positive effect on Online Video adoption***

## **2.9 Literature Review Pertaining to Hypothesis 5: Observability of online video services.**

Observability refers to the degree to which the results of the innovation are observable by others (Gary & Benbasat, 2001). Al-Jabri & Sohail (2012) further describe observability as the degree to which a new innovation is visible to members of a social system. This observability allows the benefits of the innovation to be easily observed and communicated through the social system. Modelling a new innovation is a key motivational factor in the adoption of a new technological innovation (Sahin, 2006).

Furthermore, Observability can be divided into two constructs. Firstly, its visibility and second, its ability to demonstrate results. (Al-Jabri & Sohail, 2012). The easier it is for a user to experience the results of an innovation the more

likely they are to adopt and use the new innovation. The more visible the results of an innovation are the lower the uncertainty for the user, this also encourages discussion about the new idea as friends, family and neighbours often need information about the new product (Robinson, 2012).

***Hypothesis 5: Observability has a positive effect on Online Video adoption***

## **2.10 Literature Review Pertaining to Hypothesis 6: Satisfaction**

Satisfaction is the most commonly used factor for measuring the adoption of a new innovation. Satisfaction is the dependent variable for Information Technology success for two reasons. Firstly, satisfaction has a level of face validity and secondly, satisfaction is broadly used as a way to measure success and post adoption quality for mobile services (Al-Jabri & Sohail , 2012).

***Hypothesis 6: Satisfaction will have a positive effect on Online Video adoption***

## **2.11 Literature Review Pertaining to Hypothesis 7: Online Video Affordability**

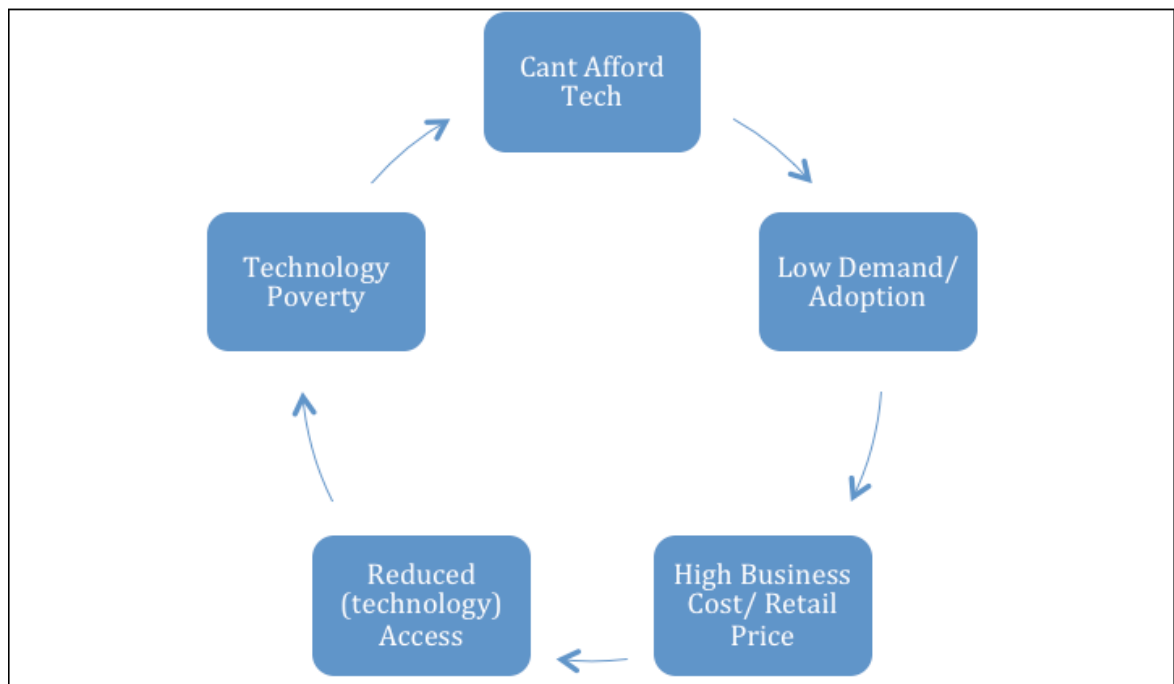
Affordability can be described as the degree to which potential customers are willing and able to pay the price that is being asked (Nezakati, Ali, & Asgari, 2012). According to Zhen & Mansori (2012) basic economic theory dictates that when the price of products or services decreases, it results in consumers

adopting or purchasing more of the product or service. Furthermore, Nezakati, Ali , Mansori, & Noghondari (2011) states that the price of a product is considered good if it is set at a level where it is able to generate profit for the organisation and most importantly, the price needs to be within an affordable range for the consumer. The price that should be paid for products and services should be determined by the quality that will be determined in the customer's mind (Nezakati, Ali , Mansori, & Noghondari , 2011).

Past research has clearly established that the use of technology is connected to socio-economic development. In developing countries, the vicious cycle between technology affordability and non-adoption hinders the acceptance of ICTs in many developing economies. Affordability and access to technology are the two critical challenges that cause a vicious cycle of non-adoption (Shambare , 2014).

Figure 6 below illustrates the Vicious Cycle of Technology Non-Adoption (V-CAN). This "vicious cycle" begins with the high cost of technology, which leads to extensive technology poverty. This technology poverty results with people who cannot afford ICTs, which result in low demand in technology. However, the cost of marketing for these businesses remains high, and this high cost reduces access, which in turn results in technologically poor consumers (Shambare , 2014).





**Figure 8: Vicious Cycle of Non-adoption (Shambare , 2014).**

***Hypothesis 7: Affordability will have a negative effect on online Video adoption***

## **2.12 Research Pertaining to Research Question 2: What is the role of the technopreneur in the diffusion of Online Video in South Africa?**

### **2.12.1 Entrepreneurial influence**

Generally, entrepreneurship seeks to understand the why, when and how opportunity creation, recognition, and utilization occurs (Naudé, Szirmai, & Goedhuys, 2011) . Thus, a broadly accepted definition of entrepreneurship is the “discovery and exploitation of opportunities” (Shane & Venkataraman,

2000). However, not all opportunities will be to the best interest of society, therefore entrepreneurs can also be defined as individuals who are 'ingenious and creative in finding ways that add to their own wealth, power and prestige' (Baumol, 1996).

An entrepreneur's innovativeness and character play an important role in the adoption of innovation process (Marcati, Guido, & Peluso, 2008). It is important to distinguish between inventions and innovations; Inventions can be expressed as the creation of a new unique idea. Innovations, however, look at how entrepreneurs are able to commercialise the idea (Dereli, 2015).

According to Block, Turik, & Zhou (2012) Schumpeter divides the entrepreneurial creative processes of economic development into three categories, those are invention, innovation (commercialisation) and imitation. Furthermore Block, Turik, & Zhou (2012) agrees with this view of entrepreneurship and innovation, further state that entrepreneurship has the ability to moderate the relationship between a country's level of knowledge and new innovations.

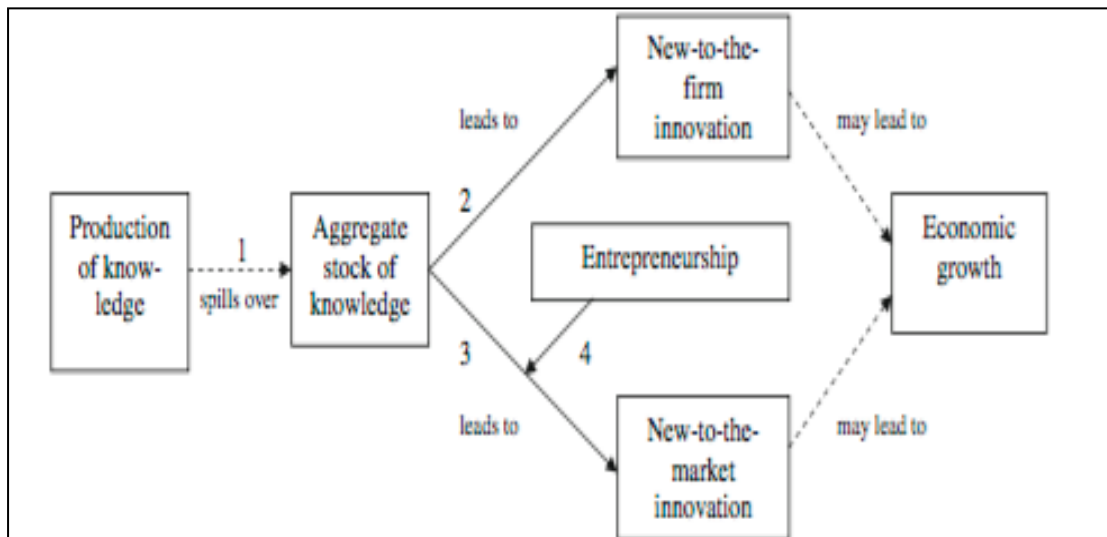
For entrepreneurs to successfully commercialise a new product or service, the entrepreneur needs to have a superior knowledge of the technological innovation. An entrepreneur's ability to get things done or exploit new technologies is constrained by his knowledge and information base (Lal, 1999).

### **2.12.2 Entrepreneurs in the diffusion of innovation**

Entrepreneurs are an important aspect of economic progress; they have an important role to play in contributing to the quality and future of a particular sector. Entrepreneurship also assists in inspiring competitiveness in an economy. The role of an entrepreneur is critical in creating new economic activity that aids job creation as well ensuring the well being of a society (Soriano & Huarng, 2013). For entrepreneurial organisations to succeed they need to create new ideas and products (Dereli, 2015).

### ***2.12.3 Entrepreneurship as a moderator between knowledge and innovation***

The figure below illustrates the conceptual model that demonstrates the role that entrepreneurs play in the association between knowledge and innovation. The creation of knowledge increases the collective stock of knowledge (arrow 1). New and existing firms are able to draw from this collective stock and develop new products to the firm (arrow 2) as well as new to the market firms (arrow 3). Entrepreneurship acts as a moderator in the relationship between the stocks of knowledge related to new-to-the market products (arrow 4) (Block, Turik, & Zhou , 2012)



**Figure 9: The Role of Entrepreneur as a Regulator (Block, Turik, & Zhou , 2012)**

#### **2.12.4 Entrepreneurial Characteristics**

Past literature on the diffusion of technological innovation has not been able to incorporate the wide ranges of factors that affect an innovation's progress. In many instances the researcher must investigate a number of different factors that affect the adoption of a new technological innovation. In capitalist economies, entrepreneurs play a catalyst role in commercialising technological innovations; a great example is Edison with the incandescent light bulb and Ford with the automobile (Miller & Garnsey, 2000).

Schumpeter made a clear distinction between adaptive and creative responses to new technology. Schumpeter defines creative response as the process by which the industry does something that is outside the scope of existing processes. Schumpeter also argues that a creative response is influenced by education level as well as decisions and behaviours of social actors.

Schumpeter's work also argued that the entrepreneur does not need to be the inventor or knowledge creator; instead, entrepreneurs are responsible for transforming knowledge into products (Block, Turik, & Zhou , 2012).

Entrepreneurs are innovators who have the role of commercialising new products, by creating new ways of doing things as well as introducing these products into new markets. Entrepreneurs should be the most effective agents in the process of commercialising inventions. Research indicates that inventions or new technologies that are commercialized by an entrepreneur rather than inventors have a higher likelihood of success (Block, Turik, & Zhou , 2012).

#### **2.12.5 *Entrepreneurs and Diffusion research***

The diffusion of innovation theory is a great source of information for factors that influence the speed and success that a new technological innovation is introduced to a market (Miller & Garnsey, 2000). The table below is an effort to categorise the wealth of diffusion of innovation research, and refers to a topology of perspectives that was established by (Brown, 1981). These perspectives were later applied by (Warkov & Meyer, 1982)

**Table 3: Perspectives of innovation diffusion, (Miller & Garnsey, 2000).**

Perspective	Discipline	Basic assumption	Unit of analysis	Factor of significance	Process
<b>Communication perspective</b>	Rural sociology, communication studies, geography, marketing	Majority of individuals are risk averse	The adopter	Adopters' uncertainty and perceived risks/benefits of adoption	Uncertainty reduction; particularly through referencing
<b>Economic history perspective</b>	Economic history, public policy	Individuals are rational economic agents	The new and old technology	Declining costs and improved performance of the new versus old technology	Technological problem-solving
<b>Development perspective</b>	Economics, development studies, agricultural economics	Unequal distribution of resources in society	The adopter	Adopters' relative purchasing power	Access to resources, particularly money and credit
<b>Market infrastructure perspective</b>	Geography	Opportunity to adopt is unequal	The diffusion agency	Availability of the new technology	Diffusion agency establishment and actions

### 2.12.6 *The communication perspective*

The communication perspective is mainly concerned with the psycho-sociological process that affects the adopters' decision-making process. The communication perspective has a two-fold assumption; firstly, the novelty of an innovation will mostly create a sense of uncertainty for the potential adopter. Secondly, potential adopters are generally risk averse (Rogers, 2003).

The communication perspective has evolved over time. Earlier research on the diffusion of innovation had a tendency of blaming the potential adopter for failing to adopt the new innovation. The communication perspective has not been able

to factor in the full range of economic, financial, managerial, and political processes behind the entrepreneur who is the key influencer in the diffusion of innovation process (Miller & Garnsey , 2000).

#### ***2.12.7 The economic perspective***

Some of the most significant research on technology diffusion has come from economic scholars. These authors focused on the supply-side in the diffusion of technological innovations, particularly how entrepreneurs can reduce the cost of new innovations and improve their usefulness for the potential adopter (Rosenberg, 1972).

When assessing the role of entrepreneurs in the diffusion of innovations, economic authors often concentrate solely on the entrepreneur's "problem solving" responsibilities, which is primarily a technical responsibility (Rosenberg, 1972). By viewing the entrepreneur solely as the product developer the economic perspective does not consider the countless non-technical problems that an entrepreneur must solve (Miller & Garnsey, 2000).

#### ***2.12.8 The development perspective***

The development perspective assumes that the potential adopters in a society have unequal access to resources for adoption. The most important of these resources are money or credit (Brown, 1981).

The development perspective unlike the communication perspective groups adopters according to their access to resources instead of grouping adopters on

whether they are innovators or late adopters. The development perspective also dictates that even the most cost efficient technological innovations can be diffused slowly if the potential customers do not have the financial means to pay for it (Miller & Garnsey, 2000).

The development perspective often suffers from structural and static analysis in which the entrepreneur is not interested in reacting to the purchasing power limitations in certain sections of the market. This perspective does not consider the fact that an entrepreneur can react timeously to make technological innovations more affordable (McNeil, 1996)

#### **2.12.9 *The market infrastructure perspective***

The market infrastructure perspective is associated with geography discipline and the author Lawrence Brown. This perspective is based on the assumption that diffusion can be controlled by the availability of the product (Brown, 1981). The results of identifying availability, as a restriction to adoption is that it directs attention on institutional instead of individual behaviour (Miller & Garnsey, 2000).

### **2.13 Conclusion**

Research on the diffusion of innovation should account for the entrepreneur's role in the innovation process (Block, Turik, & Zhou , 2012). However, this literature review has indicated that many authors have failed to provide an integrated view of how entrepreneurs are able to influence technology diffusion. The diffusion of innovation process is influenced significantly by entrepreneurial



capabilities as well as their ability to match the correct resources with the correct opportunities (Miller & Garnsey, 2000).

The aim of this literature review is to answer the following questions:

#### **2.13.1 Sub-problem 1:**

To evaluate the factors of that influence the diffusion of innovation in the online video industry.

Research Question 1: What are the factors that influence the adoption of online video content in the South African market?

**Hypothesis 1: Relative advantage will have a positive effect on Online Video adoption**

**Hypothesis 2: Complexity will have a negative effect on Online Video adoption.**

**Hypothesis 3: Compatibility will have a positive effect on Online Video adoption**

**Hypothesis 4: Trialability will have a positive effect on Online Video adoption**

**Hypothesis 5: Observability has a positive effect on Online Video adoption**

**Hypothesis 6: Satisfaction will have a positive effect on Online Video adoption**

**Hypothesis 7: Affordability will have a negative effect on online Video adoption**

**Hypothesis 8: Entrepreneurial influence will have a positive effect on online Video adoption**

### **2.13.2 Sub problem 2:**

To determine the role of the technopreneur in the diffusion of online video services in South Africa.

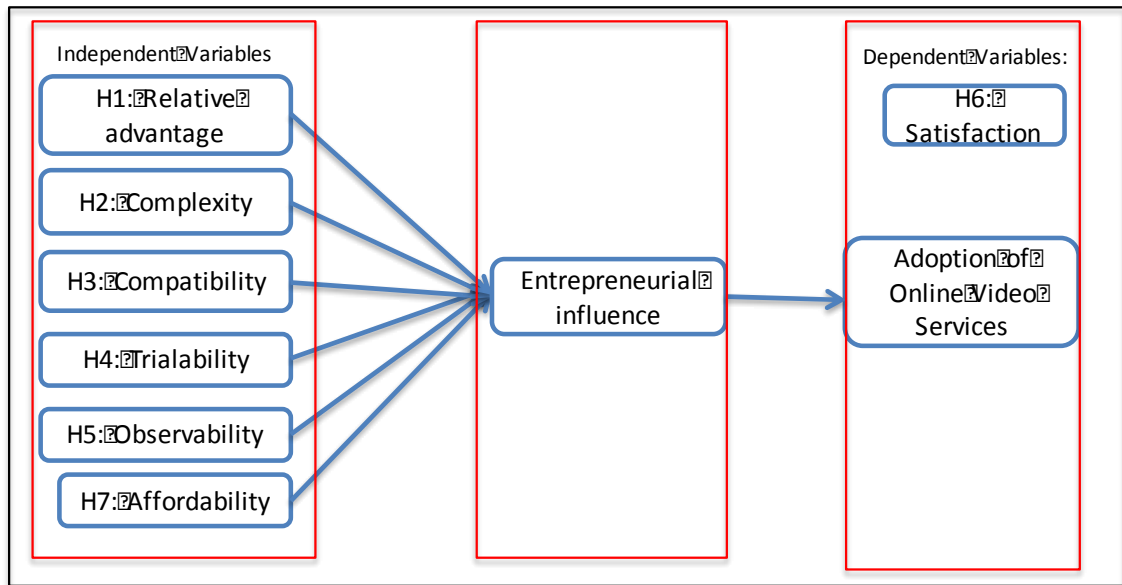
**2.14 Research Question 2:** What is the role of the technopreneur in the diffusion of Online Video in South Africa?

### **2.15 Research model**

Thus, within the framework of the research, the model in Figure 9 below is proposed.

It is an adapted model that was developed to summarise the hypotheses tested as well as answer the research questions that emerged from this literature review. The model is divided into three parts. The first part is related to factors that influence the individual's propensity to adopt a new technology, the second part looks at the role of the technopreneur in the diffusion of innovation process and the third part synthesises all of the factors and determines what affects the speed at which an innovation is commercialised.

For the purpose of this research hypothesis 6 is the dependent variable and independent variables relative advantage, complexity, comparability, trialability, observability and affordability will be tested against satisfaction.



**Figure 10 Basic Research Model**

### 3 CHAPTER 3: RESEARCH METHODOLOGY

The aim of this chapter is to describe in detail how the research will be conducted. This chapter will discuss the methodology, design and instruments as well as the sample population, the procedure for data collection, data analysis, interpretations, validity, reliability as well as the statistical methods used to test the hypothesis.

#### 3.1 Research approach / paradigm

This research will follow a pragmatic or mixed methods research paradigm. This means that to answer the research questions by doing quantitative and qualitative data. The pragmatic approach includes using methods that are best suited to answer the research problem and does not get involved in philosophical discussions about which is the best process (Volschenk, 2015).

Furthermore, Pragmatics do not perceive the world to be in complete harmony. Likewise, mixed method researchers use many approaches to collect and analyse data rather than subscribing or committing to one method of collecting data (Creswell , 2008). The table below aims to illustrate and explain the different kinds of approaches to conducting research. The table clarifies qualitative, quantitative as well as Mixed methods research.

**Table 4: Over Approach Types (Creswell , 2008)**

Quantitative	Qualitative	Mixed Methods
Experimental designs Non-experimental designs, such	Narratives Phenomenologies	Sequential Concurrent Transformative

as surveys	Ethnographies Grounded Theory Case studies	
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### 3.2 Research Design

This research was conducted by using the mixed methods approach, meaning both quantitative and qualitative methods were used to collect data. Figure 9 below indicates that research model that was followed in order to complete this research.

This research was completed by conducting surveys as well as interview questions in order to answer the research questions:

- R1: What are the factors that influence the adoption of online video content in the South African market?
- R2: What is the role of the technopreneur in the diffusion of Online Video in South Africa?

#### 3.2.1 Survey Questionnaires

Survey questionnaires were distributed to determine the rate of adoption for online video services in the South African market. The survey data was collected from South Africans between the ages of 18 and 40 residing in the Gauteng metropolitan areas. These surveys were conducted in order to determine the attributes of an innovation that are important for the successful diffusion of online video services.

### **3.2.2 Entrepreneur Interviews**

Because the market for online video content is not yet mature in South Africa and doesn't have a lot of players, entrepreneurs, intrapreneurs and subject matter experts in the online video services industry were identified. These interviews were important for determining the entrepreneur's role in decreasing uncertainty and speeding up the rate of adoption for online video services.

## **3.3 Population and sample**

### **3.3.1 Population**

#### The survey questionnaires

The survey questionnaire was targeted at South Africans between 18 and 40 years old residing in the Gauteng region. Within youth structures in South Africa there are different definitions of what youth is. The popular definition for youth is often accepted as individuals between the ages of 14 and 35. For example, the White Paper on Social Welfare (1997) defines youth as individuals between 16 and 30 years, while the Child Care Act (1983) defines a young person and individuals under the age of 30 (Southern African Regional Poverty Network, 2008).

#### Interviews

The population for the interviews included entrepreneurs, intrapreneurs and subject matter experts in the online video market.

### 3.3.2 Sample and sampling method.

**Table 5 Profiles of Respondents**

Type of respondent	Number of respondents
South Africans aged 18 – 40 years old.	200
Entrepreneur interviews	10

## 3.4 The research instrument

### Survey questionnaire

The survey instrument used in this study is a modified instrument from Al-Jabri & Sohail (2012) in their study of mobile banking. The questionnaire consisted of three parts. The first part was the demographic questions, which was designed to determine the respondent's demographic profile.

The second part looked at the respondent's history with online video services, the aim of which is to determine if the user has used these services before. The third part of the questionnaire looked at the adoption of new innovations, and endeavored to determine if the users had a high potential of adopting online video services. In order to measure consumer's perception of what the influence of the entrepreneur is, a questionnaire by Shahadan , (1996)

For the purpose of this study affordability was measured instead of perceived

risk, which was more relevant for a study on banking. Affordability is an important component when discussing internet products in South Africa. The internet in South Africa is often regarded as expensive and many people do not have access to it in their homes. To measure affordability, a scale from Zhen & Mansori (2012) in their study on Young Female Motivations for the Purchase of Organic Food in Malaysia was used.

#### Interview questions

The qualitative data collection consisted of interviews with technopreneurs, these were in form of semi-structured questions. The aim of these questions was to gain a better understanding of the role of entrepreneurship in the diffusion on innovation process and also to ascertain if entrepreneurs perceive themselves as strong influencers in the adoption and diffusion of online video. The questions in the interviews were steered or influenced by the constructs in the adoption of innovation questionnaires.

### **3.5 Procedure for data collection**

#### Survey questionnaire

For the purpose of this research, questionnaires were distributed via online surveys using Qualtrics. The survey link was distributed on social media networks like Facebook, Twitter and LinkedIn as well as sent via mail to possible respondents. Social media proved to be a great method because the people in my network were able to send the survey to their contacts.



The online survey questionnaire was distributed in the second week of December to allow 8 weeks for survey to be distributed and answered by the respondents. The reason online surveys are that it makes it easier to collect and collate data. Also, the survey questionnaires enable the respondents to provide answers “on the go” using smartphones, tablets or laptops.

### Interview questions

For the interview questionnaires individuals were identified and contacted via an email in which that introduced myself and requested a meeting. After the meeting requests were accepted, a date and time with the interviewee were confirmed. The interview questions were derived from the factors in the survey questionnaire and are available in Appendix B.

During the interview the interviewee was assured about the confidentiality of the interview. The interviews were recorded and notes were also taken. After the interview the notes and recordings were used to analyse the responses and identify similarities in the responses received and then the responses were collated for the final result presentation.

## **3.6 Data analysis**

### **3.6.1 Survey questionnaire**

After collecting the data, the data will be analysed using the SPSS stats tool. To test the reliability of every factor, internal consistency through Cronbach Alpha analysis will be used. Regression analysis will also be conducted. The

regression testing will analyse the dependent variable, which is the satisfaction of online video service users (Al-Jabri & Sohail , 2012).

A factor analysis will be done on the different constructs within the instrument in order to analyse the number of factors each construct can be classified into, the number of factors within each construct and the accumulated percentage of explained variance.

### **3.6.2 Interview questions**

After conducting the interviews with the ten entrepreneurs in the online video industry I will analyse the data using a thematic analysis. Thematic analysis is way of arranging and analysing qualitative data. Thematic analysis seeks to extract major themes in texts at different levels. Thematic analysis assists in structuring and depicting themes (Attride-Striling, 2001). However, in this research the themes were already outlined by the factors of diffusion.

### **3.6.3 Triangulation**

For the purpose of this mixed method study, I will be doing triangulation to connect the results that will come out of the survey questionnaire and the interviews. Triangulation can be described as “the combination of methodologies in the study of the same phenomenon” (Jick, 1979).

### **3.7 Validity and reliability of research design**

#### **3.7.1 External Validity**

This type of validity indicates the ability for the research design to deliver results that can be generalized for different situations, particularly to natural (“real-life”) situations (Ricker, 2015).

Because of time and resource limitations this research only looks at respondents in urban Gauteng only. As a result, a future study of this nature that covers the whole of South Africa and of the African continent, which has different income levels and levels of access to internet, could lead to different results.

#### **3.7.2 Internal validity**

Internal validity relates to the capability of a research design to deliver a satisfactory test of a hypothesis (Ricker, 2015). The research design is done so that it can give results based on the research hypotheses tested. In this research report, a coherency matrix was established to guarantee that each question efficiently addresses a concern of the research.

#### **3.7.3 Reliability**

After the development of the instrument, a pilot test was conducted and the questionnaire was dispersed to 50 randomly selected people between the ages of 18 to 40 years old. This was done to ensure that the questionnaire is clear

and valid.

After obtaining feedback, certain questions were removed because they did not serve any purpose in this pilot. Questions about race and nationality were removed. Furthermore, feedback was received about some questions not being clear so after the pilot the wording in these questions was then revised. Cronbach alpha will be measured to determine internal reliability.

#### **3.7.4 Limitations of the study**

Because using technological products can be expensive and only open for certain socio economic groups, it can cause a skew in opinion depending on what segment of the population you are researching. Low income communities might have different outlooks on certain technologies and not see them as necessary, whereas middle to high income segments might have more disposable income.

There are not many online video services in South Africa, so the interview responses from the entrepreneurs will be limited to a small number of interviews.

## **4 CHAPTER 4: PRESENTATION OF RESULTS**

### **4.1 Introduction**

This chapter will present the results for the quantitative and the qualitative data acquired in the research. In the Quantitative study, following data collection, the statistical analysis was processed through SPSS.

This chapter will begin with the presentation of the quantitative research, beginning with a demographic profile of respondents, followed by the scale characteristics and the results related to the testing of each hypothesis. This will be followed by a presentation of the qualitative results from the interview questions.

### **4.2 Demographic profile of respondents**

Initially, the Qualtrics survey questionnaire resulted in 266 electronic respondents. However, after cleaning the data and removing responses that were not completed there were 205 responses remaining.

The final sample was made up of 205 respondents of which 50% were male and 50% female. The majority of the respondents were people between 18 – 30 years old (65%), while the other 21% were 31 – 35 years old and 14% were 36 years and older.

A proportion of 25% had degrees, 33% had post graduate degrees while 25% had diplomas and 16% had Matric certificate only. The monthly personal

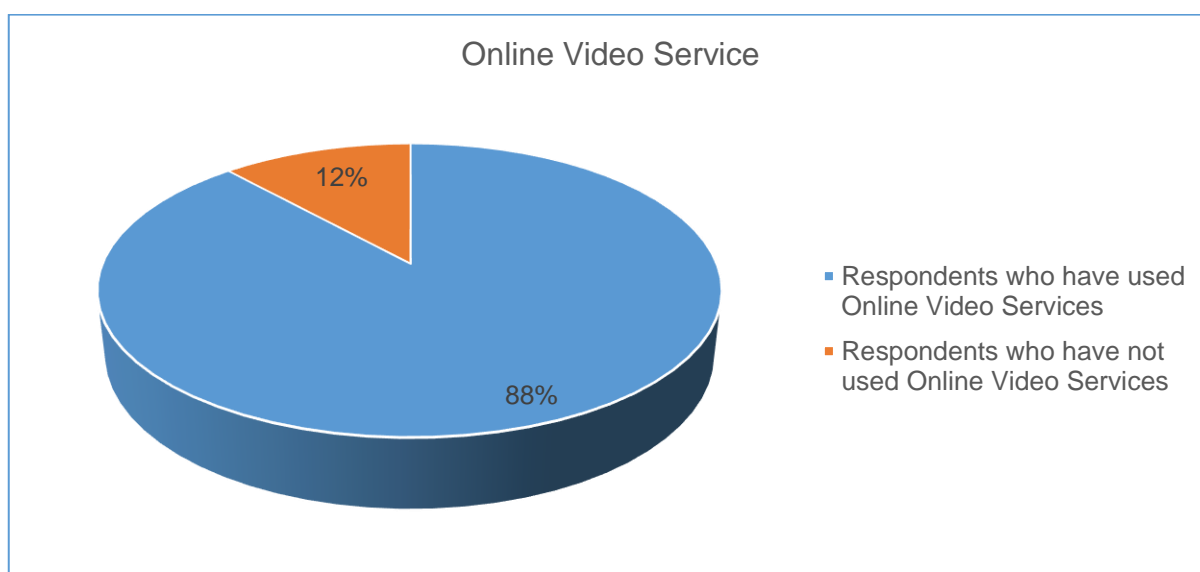
income ranged from Less than R10, 000 (34%) up to R40, 000.00 and above (30%). These respondents were mainly Experienced Professional workers (53%) with another 12% at entry level, 28% students and 7% were self-employed.

**Table 6 Sample Demographics**

Variable		Frequency	Percentage
Gender	Male	102	50%
	Female	103	50%
Age:	18 - 25 years old	54	26%
	26 - 30 years	79	39%
	31 - 35 years old	43	21%
	36 - 40 years old	29	14%
Highest qualification	High School	33	16%
	Diploma	52	25%
	University Degree	52	25%
	Post Graduate Qualification	68	33%
Monthly Income:	Less than R10,000 per month	70	34%
	R11,000 - R20,000	23	11%
	R21,000 - R30,000	29	14%
	R31,000 - R40,000	22	11%
	R41,000 and above	61	30%
Occupation:	Employed - Experienced Professional	108	53%
	Student	58	28%
	Employed - Entry Level	24	12%

	Self Employed	15	7%
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#### 4.2.1 *Online Video Service Usage*



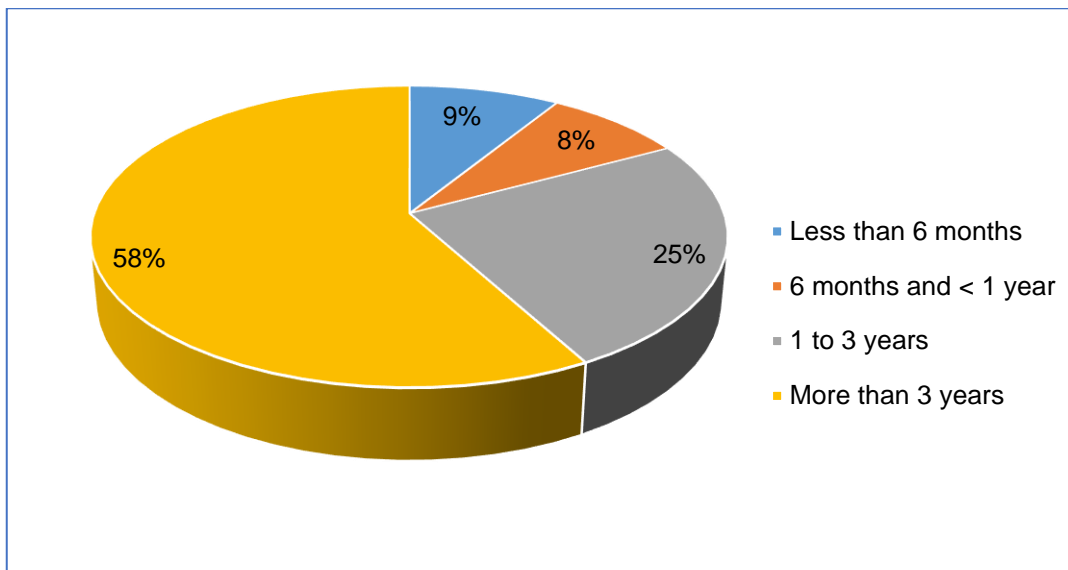
**Figure 11: Ever used an online Video services**

A vast majority of the respondents (88%) had used Online Video Services before, while the remainder (12%) had never used Online Video Services as shown in the pie chart above in Figure 12.

#### 4.2.2 *Period using Online Video Services*

The chart below illustrates the amount of time that the respondents have been using online video services. The majority of respondents (58%) have been

using Online Video Services for more than 3 years. 9% of the users had been using Online Video Services for under 6 months.



**Figure 12: How long have you been using Online Video Services**

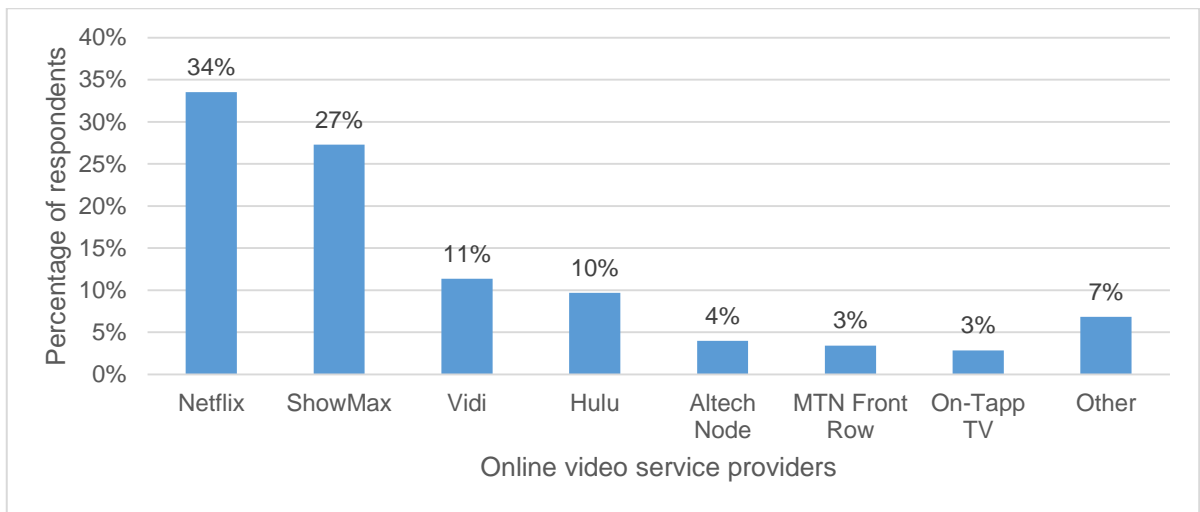
#### **4.2.3 Online Video Services used**

Figure 14 illustrated below shows the online video services providers that are used by respondents. It is important to note that at the time of data collection Netflix South Africa had not yet been launched in the country, so the respondents that were using Netflix along with Hulu were most doing so illegally. Netflix South Africa has since been launched however it was not included in this data analysis.

Netflix was the most popular Online Video Services provider, being used by 34% of the respondents followed by ShowMax (27%) and Vidi (11%). The rest of the services are shown in Figure 3. Some of the users that indicated that they



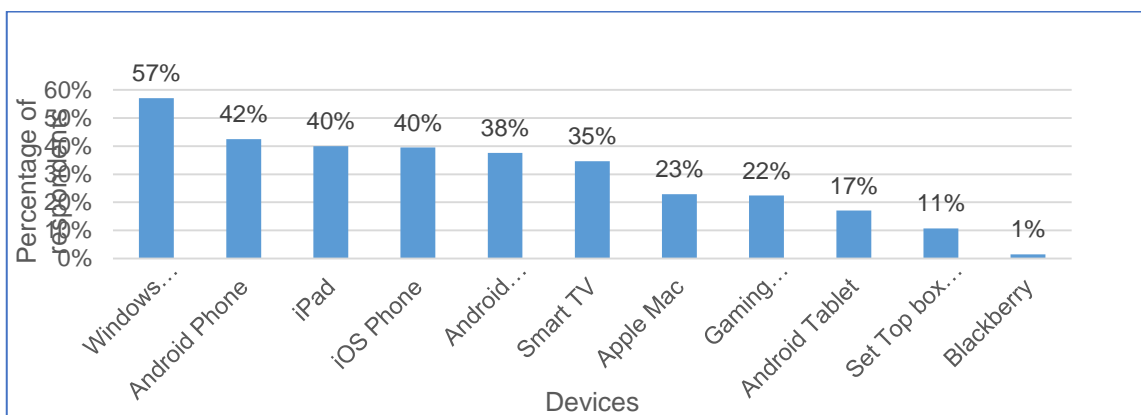
have used other services had used Video On Demand services like Youtube, Vimeo, DStv Now, Apple TV, NBA Live and Amazon Prime



**Figure 13: Online video service providers**

#### 4.2.4 *Devices used*

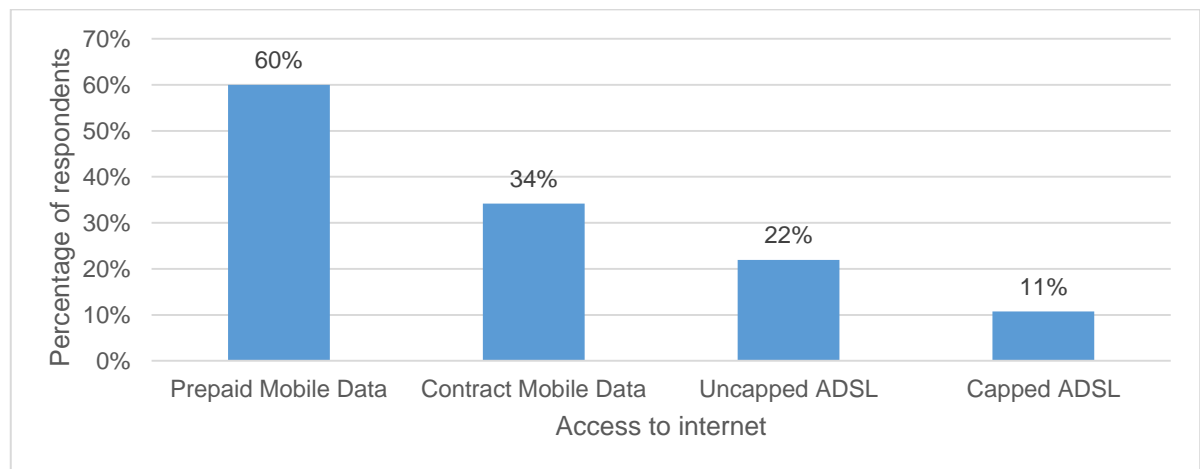
The respondents were also asked to indicate the devices that they have in their households. The results are shown in Figure 4. It can be noted that Windows Laptop (57%) were the most common devices that respondents have at their disposal at their homes on which they can watch online movies, followed by Android Phone (42%), iPad(40%) and iOS Phone(40%). The lowest mention was for Blackberry phone.



**Figure 14: Devices in household**

#### **4.2.5 Internet access**

Figure 16 shows how respondents access the internet within their household. Prepaid Mobile Data (60%) was the most common method of accessing internet within household, followed by Contract Mobile Data (34%), then Uncapped ADSL (22%) and Capped ADSL (11%). The chart below shows the perceptions of respondents on whether the South African online video services are of the same quality as international service providers.

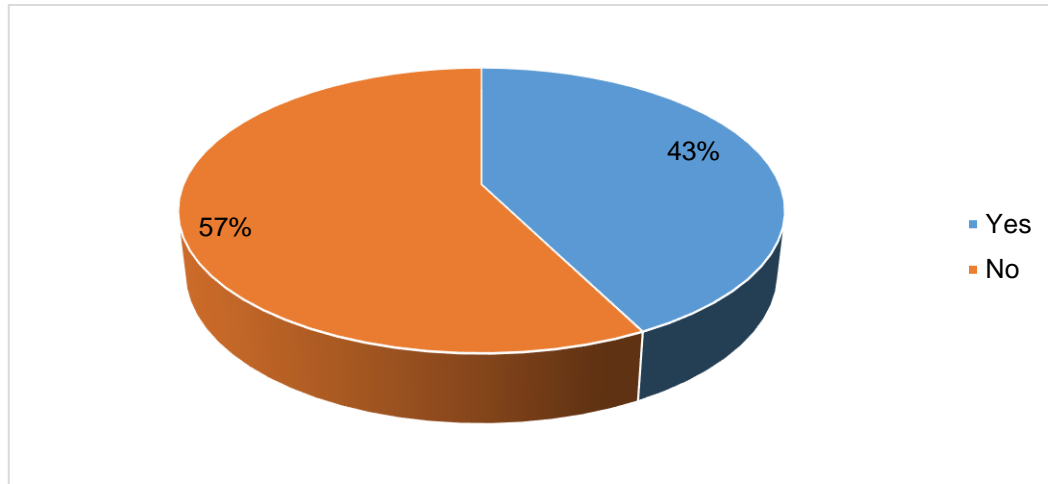


**Figure 15: Internet access patterns in consumer households**

#### **4.2.6 Quality of South African Online Video Service Providers**

The results revealed that more than half of the respondents (57%) are of the view that South African Online Video Services are not of the same quality as

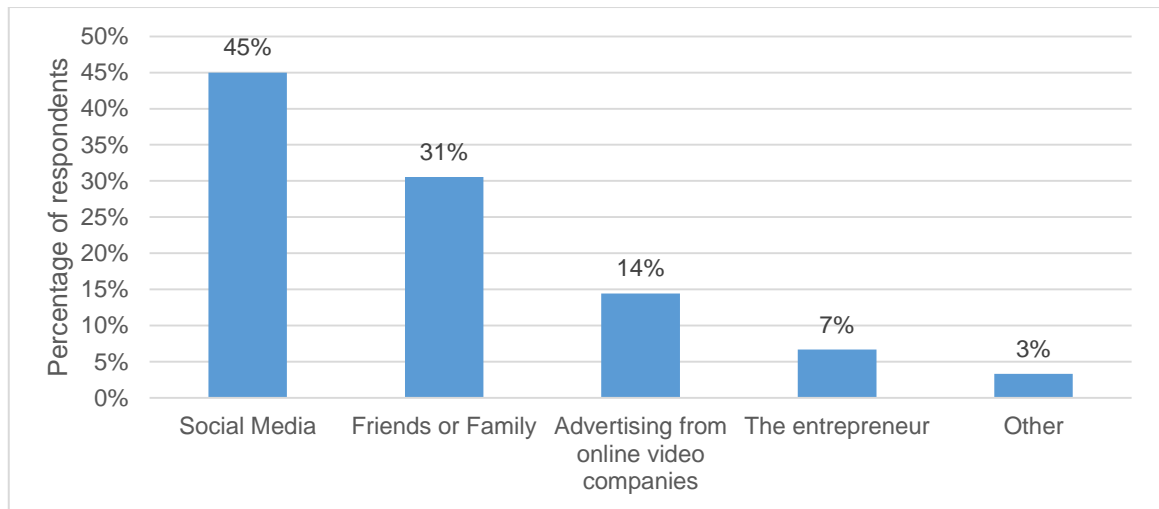
international service providers with the other 43% having the perception that they are of the same quality.



**Figure 16: Quality of South African Online Video Services versus International Services**

#### **4.2.7 Entrepreneurial Influence**

The largest proportion of respondents were prompted to use online video services from social media (45%), while 31% had the services being recommended by friends of family.



**4.2.8 Figure 17: Source of initiation/inspiration/recommendation adoption of online video services.**

### 4.3 Measurements Scale

#### Scale validity

Validity of the constructs was tested using exploratory factor analysis. For the affordability construct, the scale for the variable “Overall the price of online Video services is reasonable” was reversed (i.e. 1 = 5, 2 = 4, 3 = 3, 2= 4, 1 = 5), since it was the opposite of the rest of the variables in that construct. Thus the variable became “Overall the price of online Video services is **NOT** reasonable”.

Table 1 shows the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity. All the KMO values were greater than the minimum required value of 0.5 with the value for Triability at exactly 0.5. This implies that the sample was adequate to conduct factor analysis for each of the

constructs. The Bartlett's Test of Sphericity had p-values of less than 0.05 as required for factor analysis to be fitted for all the factors.

**Table 7 : KMO and Bartlett's Test**

<b>Relative Advantage</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.821
Bartlett's Test of Sphericity	Approx. Chi-Square	490.401
	df	6
	Sig.	.000
<b>Compatibility</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.654
Bartlett's Test of Sphericity	Approx. Chi-Square	315.292
	df	6
	Sig.	.000
<b>Observability</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.692
Bartlett's Test of Sphericity	Approx. Chi-Square	111.322
	df	6
	Sig.	.000
<b>Complexity</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.657
Bartlett's Test of Sphericity	Approx. Chi-Square	110.303

	df	3
	Sig.	.000
<b>Triability</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.500
Bartlett's Test of Sphericity	Approx. Chi-Square	193.355
	df	1
	Sig.	.000
<b>Satisfaction</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.770
Bartlett's Test of Sphericity	Approx. Chi-Square	563.718
	df	10
	Sig.	.000
<b>Affordability</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.699
Bartlett's Test of Sphericity	Approx. Chi-Square	132.457
	df	6
	Sig.	.000

All the items in each construct had a high factor loading on to the construct.

**Table 8: Measurement Scale Validity**

Construct	Item	Factor Loading	Total Variance Explained
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Relative Advantage	Online Video Services gives me greater control over what movies and series I watch	0.915	75.183
	Online Video Services allow me easy access to my favourite movies and series.	0.911	
	Online Video Services are a convenient way to watch Movies and Series	0.832	
	Online Video Services are useful for scheduling Movies and Series	0.805	
Compatibility	I like to try new technology	0.835	61.602
	I like to adopt new innovation	0.784	
	Online Video Services are compatible with my lifestyle	0.783	
	Online Video Services fit well with the way I like to view my Video Content	0.735	
Observability	With Online Video Services I do not have to wait to watch movies and series.	0.737	49.618
	Online Videos can be accessed anytime and anywhere in South Africa	0.705	
	Online Video Services can be accessed when abroad	0.688	
	I can see the effect of my Online Video usage immediately	0.686	
Complexity	Using Online Video Services requires technical skills	0.833	62.627
	Using Online Video Services require a lot of mental effort	0.776	
	Using Online Video Services can be frustrating	0.763	

Triability	I want to use Online Videos on a trial basis to see what they can do for me	0.945	89.331
	I want to try an online video service for at least for at least one month	0.945	
Satisfaction	I am satisfied with the service I have received from Online Video service providers	0.847	65.782
	Overall, I was satisfied with Online Video services	0.836	
	I think that I made the correct decision by using Online Video Services	0.801	
	I am satisfied with the content that Online Video Service Providers provide	0.791	
	I would strongly recommend Online Video Services to others	0.779	
Affordability	The price of Online Video Services is High (including the cost data)	0.817	50.931
	Price is the most important factor when it comes to subscribing to online video services.	0.790	
	The price of Online Video Services is high (excluding the cost data)	0.688	
	Overall the price of online Video services is <b>NOT</b> reasonable.	0.521	

Reliability of scale was then conducted for each construct using Cronbach's Alpha. The results for factor analysis and Cronbach's Alpha are shown in Table 4.



**Table 9: Measurement Scale Reliability**

Construct	Items	Cronbach's Alpha
Relative Advantage	4	0.887
Compatibility	4	0.791
Observability	4	0.658
Complexity	3	0.701
Triability	2	0.880
Satisfaction	5	0.869
Affordability	4	0.662

The constructs Relative Advantage (0.887), Compatibility (0.791), Complexity (0.701), Triability (0.880) and Satisfaction (0.853) had very high levels of reliability since the Cronbach's Alpha values were higher than the desired 0.7. The constructs Observability (0.658) and Affordability (0.662) had Cronbach's Alpha values less than the required 0.7 for good internal consistency but they are still acceptable since they are greater than 0.5.

A summated scale was computed for each of the constructs by taking the average of all the items within each construct. The descriptive statistics for the summated scales of the constructs are shown below;

**Table 10: Descriptive Statistics**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Compatibility	205	1.00	5.00	4.00	0.723

Satisfaction	205	2.00	5.00	3.82	0.656
Relative Advantage	205	1.00	5.00	3.80	0.948
Triability	203	1.00	5.00	3.68	0.969
Observability	205	1.00	5.00	3.49	0.779
Affordability	205	1.00	5.00	3.43	0.768
Complexity	205	1.00	5.00	2.93	0.926

The respondents agreed the most with compatibility (4.00), followed by satisfaction (3.82), Relative Advantage (mean = 3.80), Triability (mean = 3.68), observability (3.49), affordability (3.43), complexity (2.93).

#### 4.3.1 Correlation Analysis

Correlation analysis was computed to assess the Hypotheses with respect to the strength of the association any two of the constructs. The results are shown below;

**Table 11: Pearson's Correlation Matrix**

Correlations								
		1.	2.	3.	4.	5.	6.	7.
1.Relative Advantage	Pearson Correlation	1						
	Sig. (2-tailed)							
2.Compatibility	Pearson Correlation	.477*	1					
	Sig. (2-tailed)	.000						
3.Observability	Pearson Correlation	.103	.242*	1				
	Sig. (2-tailed)							

	Sig. (2-tailed)	.141	.000					
4.Complexity	Pearson	-.095	-.134	-	1			
	Correlation			.155*				
	Sig. (2-tailed)	.177	.055	.027				
5.Triability	Pearson	.072	.235*	.155*	-.112	1		
	Correlation		*					
	Sig. (2-tailed)	.307	.001	.027	.110			
6.Affordability	Pearson	-.045	.009	.084	.079	.051	1	
	Correlation							
	Sig. (2-tailed)	.525	.903	.230	.259	.466		
7.Satisfaction	Pearson	.434*	.514*	.234*	-.079	.090	-.091	1
	Correlation	*	*	*				
	Sig. (2-tailed)	.000	.000	.001	.263	.204	.194	
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

Pearson's correlation analysis shows that significant positive correlation exist between Satisfaction and Relative Advantage ( $r = 0.306$ ,  $p\text{-value} = 0.000$ ), Compatibility ( $r = 0.514$ ,  $p\text{-value} = 0.000$ ), and Observability ( $r = 0.234$ ,  $p\text{-value} = 0.001$ ). This is because the  $p\text{-values}$  were less than 0.05 and the correlation coefficients were greater than 0.

On the other hand Complexity  $r = -0.079$ ,  $p\text{-value} = 0.263$ ), Triability ( $r = 0.090$ ,  $p\text{-value} = 0.204$ ) and Affordability ( $r = -0.091$ ,  $p\text{-value} = 0.194$ ) were not significantly associated with satisfaction since the  $p\text{-values}$  were greater than 0.05.

It can be noted that there are no extremely high correlations among independent variables (>0.9) and thus there is no danger of multicollinearity.

#### 4.4 Regression Analysis

The regression model is

$$\text{Satisfaction} = 1.767 + 0.167 \text{ Relative Advantage} + 0.337 \text{ Compatibility} + 0.112 \text{ Observability} + 0.013 \text{ Complexity} - 0.019 \text{ Trialability} - 0.084 \text{ Affordability}$$

To further test the hypotheses, multiple linear regression was performed with satisfaction with Online Video Services as the dependent variable and Affordability, Compatibility, Complexity, Triability, Observability and Relative Advantage as the independent variables. The results are shown below:

**Table 12: Coefficients table**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.767	.356		4.966	.000		
	Relative Advantage	.167	.046	.243	3.640	.000	.768	1.302
	Compatibility	.337	.063	.371	5.321	.000	.703	1.422

	Observability	.112	.051	.133	2.17 6	.03 1	.910	1.09 8
	Complexity	.013	.043	.018	.295	.76 8	.949	1.05 4
	Triability	- .019	.041	-.029	-.472	.63 7	.925	1.08 1
	Affordability	- .084	.051	-.098	- 1.65 5	.09 9	.979	1.02 2
a. Dependent Variable: Satisfaction								

The Collinearity Statistics show that there is no problem of multicollinearity since the Variance inflation factor (VIF) values were all less than 10 (VIF values greater than 10 are an indication of multicollinearity). The hypotheses are answered by the results shown on the coefficients table. This is summarised below.

**Table 13: Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.575 <sup>a</sup>	.331	.310	.54542
a. Predictors: (Constant), Affordability, Compatibility, Complexity, Triability, Observability, Relative Advantage				

The model summary results show that the variables Affordability, Compatibility, Complexity, Triability, Observability and Relative Advantage explains 33.1% of variation in satisfaction with Online Video Services ( $r\text{-square} = 0.331$ ).

**Table 14: ANOVA table**

<b>ANOVA<sup>a</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.811	6	4.802	16.142	.000 <sup>b</sup>
	Residual	58.306	196	.297		
	Total	87.117	202			
a. Dependent Variable: Satisfaction						
b. Predictors: (Constant), Affordability, Compatibility, Complexity, Triability, Observability, Relative Advantage						

The ANOVA table above shows whether the variables are significant in predicting satisfaction. Results shown on the ANOVA table  $F\text{-value} = 16.142$  and  $p\text{-value} = 0.000$  is an indication that the model is significant since the  $p\text{-value}$  is less than 0.05. This implies that at least one of the variables Affordability, Compatibility, Complexity, Triability, Observability and Relative Advantage is significant in predicting satisfaction with Online Video Services. The coefficients table below shows which of the independent variables is significant in predicting satisfaction with Online Video Services.

## 4.5 Results pertaining to Hypothesis 1

Null hypothesis (H0): Relative advantage does not affect Online Video adoption ( $\beta = 0$ )

Alternative hypothesis (H1): Relative advantage will have a positive effect on Online Video adoption ( $\beta > 0$ )

The test was conducted at the 5% significance level.

Hypothesis 1 is supported by the results (Standardised Beta,  $\beta = 0.243$ , t-value = 3.640, p-value = 0.000) since the p-value is less than 0.05 and the beta coefficient for relative advantage is greater than 0. Thus, the null hypothesis is rejected in favour of the alternative hypothesis. It is therefore concluded that relative advantage has a positive effect on Online Video adoption.

## 4.6 Results pertaining to Hypothesis 2

**Hypothesis 2: Complexity will have a negative effect on Online Video adoption.**

Null hypothesis (H0): Complexity is not related to Online Video adoption ( $\beta = 0$ )

Alternative hypothesis (H2): Complexity will have a negative effect on Online Video adoption ( $\beta < 0$ ).

The test was conducted at the 5% significance level.

Hypothesis 2 is not supported by the results ( $\beta = 0.018$ , t-value = 0.295, p-value = 0.768) since the p-value is greater 0.05. Thus, the null hypothesis is not

rejected and it is concluded that Complexity is not related to Online Video adoption.

#### **4.7 Results pertaining to Hypothesis 3**

**Hypothesis 3: Compatibility will have a positive effect on satisfaction with Online Video Services.**

Null hypothesis (H0): Compatibility is not related to satisfaction with Online Video Services. ( $\beta = 0$ )

Alternative hypothesis (H3): Compatibility will have a positive effect on satisfaction with Online Video Services. ( $\beta > 0$ )

The test was conducted at the 5% significance level.

Hypothesis 3 is supported by the results ( $\beta = 0.371$ ,  $t\text{-value} = 5.321$ ,  $p\text{-value} = 0.000$ ) since the  $p\text{-value}$  is less than 0.05 and the beta coefficient for Compatibility is greater than 0. Thus, the null hypothesis is rejected in favour of the alternative hypothesis. It is therefore concluded that Compatibility will have a positive effect on satisfaction with Online Video Services.

#### **4.8 Results pertaining to Hypothesis 4**

**Hypothesis 4: Trialability will have a positive effect on Online Video Services**

Null hypothesis (H0): Trialability is not related to Online Video adoption ( $\beta = 0$ )

Alternative hypothesis (H4): Trialability will have a positive effect on Online Video adoption ( $\beta > 0$ )

The test was conducted at the 5% significance level.



Hypothesis 4 is not supported by the results ( $\beta = -0.029$ , t-value = -0.472, p-value = 0.637) since the p-value is greater 0.05. Thus, the null hypothesis is not rejected and it is concluded that Triability is not related to Online Video adoption.

## **4.9 Results pertaining to Hypothesis 5**

### **Hypothesis 5: Observability will have a positive effect on Online Video adoption**

Null hypothesis (H0): Observability is not related to satisfaction with Online Video Services. ( $\beta = 0$ )

Alternative hypothesis (H5): Observability will have a positive effect on satisfaction with Online Video Services. ( $\beta > 0$ )

The test was conducted at the 5% significance level.

Hypothesis 5 is supported by the results ( $\beta = 0.133$ , t-value = 2.176, p-value = 0.031) since the p-value is less than 0.05 and the beta coefficient for Observability is greater than 0. Thus, the null hypothesis is rejected in favour of the alternative hypothesis. It is there concluded that Observability will have a positive effect on satisfaction with Online Video Services.

## **4.10 Results pertaining to Hypothesis 7**

### **Hypothesis 7: Affordability will have a negative effect on online Video adoption**

Null hypothesis (H0): Affordability not related to Online Video adoption ( $\beta = 0$ )

Alternative hypothesis (H5): Affordability will have a negative effect on online Video adoption ( $\beta < 0$ )

The test was conducted at the 5% significance level.

Hypothesis 7 is not supported by the results ( $\beta = -0.098$ , t-value = -1.655, p-value = 0.099) since the p-value is greater than 0.05. Thus, the null hypothesis is not rejected and it is concluded that Affordability is not related to Online Video adoption.

#### 4.11 Summary of the results

**Table 15: Summary of Hypotheses**

	Independent variable	Dependent variable	$\beta$	t-value	P-value	Result
H1	Relative Advantage	Satisfaction	.243	3.640	.000	Supported
H2	Complexity	Satisfaction	.018	.295	.768	Not Supported
H3	Compatibility	Satisfaction	.371	5.321	.000	Supported
H4	Triability	Satisfaction	-.029	-.472	.637	Not Supported
H5	Observability	Satisfaction	.133	2.176	.031	Supported
H7	Affordability	Satisfaction	-.098	-1.655	.099	Not Supported

## **4.12 Results pertaining to research question 2: What is the role of the technopreneur in the diffusion of Online Video in South Africa?**

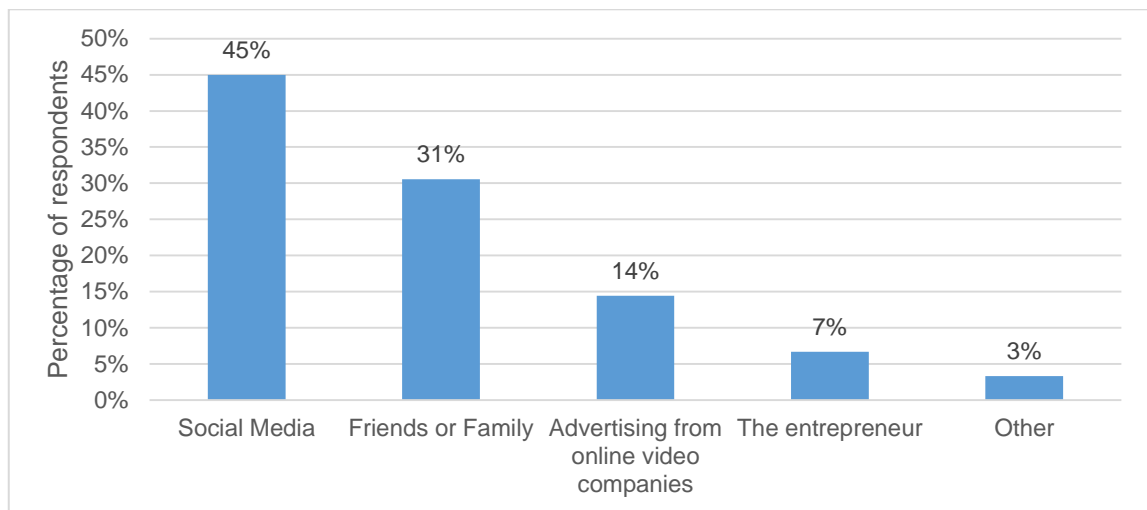
The qualitative research was collected by interviewing entrepreneurs, intrapreneurs, researchers, as well as subject matter experts in the online video services industry. The questionnaire that was used for the interview questionnaire was designed around themes that were determined in the quantitative questionnaire.

The aim of the qualitative research is to attempt to answer Research Question 2 which is, What is the role of the technopreneur in the diffusion of Online Video in South Africa? This could only be answered by looking at the Technopreneurs and analysing how they make their decisions and why they make these decisions. The online video services industry in South Africa is not yet mature, and for this reason, only 10 respondents were interviewed.

### **4.12.1 *Entrepreneurial influence***

While completing the online survey questionnaire potential adopters were asked what or who inspired them to start using online video services. Only 7% of the respondents believed that they were inspired to adopt online video services by entrepreneurs. The majority of the respondents 45% were motivated to use online video services by social media followed by 31% who were motivated by their friends and family. Lastly 14% of the respondents said that they were

stirred into using online video services by the advertising from the online video services providers.



**Figure 18 Entrepreneurial Influence**

#### **4.12.2 *Relative advantage***

The majority of the respondents in the qualitative aspect of the research indicated that online video Services have been a popular form of video viewing for some South Africans, as respondents were aware that their clients had been using free services YouTube, facebook and vimeo. Furthermore, some respondents indicated that South Africans were already accessing online video services when they were overseas. Moreover, some South Africans were accessing services like Netflix illegally in South Africa, this was a great indication that the product was needed.

Many of the respondents stated that companies often conduct research that concentrates on local and international trends in the online video services industry. Some respondents also indicated that South African Technopreneurs

that want to play in this space need to create products that are as good as those of their international counterparts and that. This is difficult to achieve as many of the American online video services are leaders in the industry and South African technopreneurs need to create products that are on par with these products.

Respondents also indicated that Many South Africans have a DStv Subscription. If they have a premium package, then they also have access to DStv VOD products like Catch-Up and Box Office. DStv also allows their clients with a premium subscription to access their content online on platforms like DStv Now. Other respondents also indicated that the success of new players like ShowMax is also indicative of the fact that Naspers who also own Multichoice have been able to use the lessons they have learnt from being in the Pay-TV industry.

According to some respondents, the key to creating relative advantage in online video service is to create a product that is better than what most consumers already have access to. These respondents also thought that in the South African scenario DStv will remain a strong competitor because it can give their customers access to many top programmes and they are able to broadcast these shortly after they have been broadcast in the United States. Some respondents also indicated that this industry is extremely expensive to participate in and therefore it seems that the new players that are doing well have to have the backing of large corporates. This makes it difficult for independent providers to succeed. However, the respondents indicated that it is

still possible for smaller players to succeed, as they often offer unique programmes that are aimed for a niche market.

#### **4.12.3 Complexity**

A consumer's perception about whether a product is complex or not is often determined by their general perceptions about the use of technology. A majority of respondents indicated that consumers who are early adopters will not find the complexity of a product as a deterrent. The respondents also said that consumers that are regarded as late adopters will often disregard products that they consider to be complex or difficult to use.

The majority of the Technopreneurs agreed that when launching a digital product like an online video services, you need to start with attracting 'low hanging fruit'. These are the people who are early adopters and most likely used online video services before, are internet savvy or are not intimidated by new technological products. However, some respondents acknowledged that concentrating on early adopters is not a viable long-term strategy and that to be profitable, online video service providers need to be able to attract the lower middle class and later the emerging customer segments. The respondents recognised that to reach these markets technopreneurs would need to engage in educational campaigns aimed at explaining how Online Video services operate, but more importantly these services need to clarify the value of online video services

The respondents also indicated that South African Online Video services providers need to ensure that they tailor their marketing and communications campaigns to a south African audience. These respondents indicated that making the marketing and communications messages more tailored will assist in ensuring that the product is easily understood and not complicated.

#### **4.12.4 *Compatibility***

As indicated previously, most respondents stressed the importance of research in the online video services industry. The respondents indicated that South African consumers often compare the quality of local online video services with international services. This gives a lot of pressure to local providers who most likely do have access to the same amount of budget that their international counterparts enjoy.

Some respondents indicated that for the South African market, local content is an important differentiator to international online video services like Netflix, which predominantly offers Hollywood content. Some respondents however, indicated that Hollywood content is still of high value and is a big draw card for customers. The respondents indicated that customers expect local companies like ShowMax, Vidi and MTN frontrow to have local content. However, the viewership for Hollywood content is still higher than those of local content.

The majority of the respondents felt that South African online video services were at the same quality or even more superior than international online video services providers like Netflix. However, some respondents felt that the need to

be comparable to international online video services providers often takes over the priority of local Providers. This leads to local providers overlooking their need to on create unique products that are tailored to a South African environment.

The respondents agreed that access to reliable internet was one of the key hindrances to the usage of online video services. This means that customers might receive low quality picture, especially compared to Pay\_TV which doesn't rely on the internet. Some respondents commented on the fact that some local online video services providers like ShowMax have developed a download function that allows customers to download content when they have access to the internet. These customers are then able to view it at a later stage, this is a differentiated feature and is unique to the needs of a South African user base.

#### **4.12.5 *Triability***

As indicated early, the interview respondents recognise that the majority of early adopters in the online video services industry have already tried the product in some form using services such as Youtube, Vimeo, DStv Catch Up and DStv Box Office. However, the respondents indicated that although these products are Video On Demand services and not Subscription Video On Demand services, they allow the consumers to get accustomed to how On demand video services work.



Many of the respondents indicated that South African online video services providers had actually been getting pressure to launch their services from their customers who had tried SVOD services when they had travelled or illegally in South Africa. Other respondents also indicated that to ensure that online video services are continually profitable, technopreneurs need to attract customers who are late adopter and in this case, trialing online video services is important.

All the respondents admitted that trialing new innovative products is important. The respondents noted that local providers have followed in the steps of their international counterparts who offer a free trial period this allows potential clients to make informed decisions on whether they adopt or reject the service.

#### **4.12.6 *Observability***

According to the interview respondents it is important for customers to observe other members of the society constantly using the products. Respondents also added that social media is also an important component, as individuals in a social system will share what content they have been viewing and how they access it. As certain content trends, it also increases awareness for the Online Video providers.

The majority of respondents indicated that having a strong social media presence is tremendously important. The respondents indicated that most of the online video services providers create a strong presence by using agencies to buy social media advertising on platforms like Facebook, Twitter and even YouTube. Social media has become the modern day “word of mouth”.

One of the respondents also indicated that the more the online video services gain traction, the more they talk about it and that creates awareness. Also this respondent added that companies like Netflix announcing in 2015 that they would be launching in South Africa in 2016 had created a lot of buzz for the industry. This excitement over the imminent launch of Netflix was described by this respondent as the “Burger King” effect, which is basically when South Africans get a product or service that they have been hearing about in American series or movies.

#### **4.12.7 Affordability**

According to the majority of respondent's, affordability is amongst the biggest barrier to entry for most consumers in South Africa. Moreover, the respondents indicated that It will be easier for middle class or high income customers to afford using these services. However, the respondents said, to use online video services customers need to have smart device, smart TV's or set top boxes as well have a reliable internet access which can be expensive for low income households.

The majority of respondents also appreciated that for technopreneurs to succeed, they would need to offer online video services that can either be a substitute or a compliment for Pay-TV customers. The respondents also added that expecting customers to pay for a Pay-TV subscription, an uncapped internet service, as well as an Online Video Services subscription is not sustainable for most consumers. The respondents added that, in most lower

income households a choice would have to be made between services. However, higher income households can afford to have a Pay-TV as well as an online video services subscription.

A majority of online video service providers agreed that they have the challenging role of keeping their cost down without compromising the quality of the service. Additionally, the respondents also indicated that they need to keep their pricing competitive in order attract new customers. Many respondents also indicated that most customers have voiced their unhappiness about the price of Pay-TV. However, although the price of online video services is low, the content is often older.

#### ***4.12.8 How do entrepreneurs ensure satisfaction for customers?***

According to the respondents for online video services to successfully satisfy customers South African technoprenurs need to create online video services that are of high quality and are competitive. Furthermore, the respondents added that technopreneurs need to ensure that they keep their fingers on the pulse.

The majority of respondents agreed that Consumers will be satisfied when their needs have been met. This means they need to get service on the right devices, with the right content at the right time. Other respondents argued that since online video services will most likely be viewed as a luxury product, it is up to the technoprenuers to create a need for this product.

A majority of the respondents also agreed that a key barrier to entry for South African customers is lack of reliable internet. Some respondents also argued that the online video services industry might be too early for the South African market because of the low quality bandwidth. According to these respondents South Africa does not have the adequate quality of internet service which would allow for customer satisfied. When probed about this some of the technopreneurs argued that online video service providers can create partnerships that decrease pricing as well as bundling products in order to increase the value proposition for the customers.

#### ***4.12.9 The role of a technopreneur in the adoption of online Video services***

Almost all the respondents in the interviews believed that technopreneurs have a very significant role to play in the adoption of online video services because they need to take the above factors and create a product that satisfies the needs of the customers. However, some technopreneurs also held the opinion that for technological products to be successfully adopted, timing is an important factor. In support of this statement, the respondents who are part of a corporate also indicated that their parent companies had tried to launch online video services in earlier years, however the market was not yet ready.

According to the respondents, to satisfy their customers, technopreneurs need to get in-depth knowledge about the clients and the market in which they operate in. The respondents further agreed that although international online video service providers are often viewed as superior by customers having a

greater knowledge of the South African and African market will make it harder for international online video services providers to survive in South Africa.

The majority of the respondents stressed the importance of South African technopreneurs creating services that are unique to South Africa. The respondents added that although early adopters will most likely understand and adopt the services more rapidly. However, the respondents further stressed that to ensure that the industry remains successful technopreneurs need to ensure that they remove all hindrances for their customers.

The respondents added that in South Africa, customers had deterrents like unstable internet access, lack of to credit cards and the variety of devices available. Some of the respondents commented on how particular online video services providers have been able to create South African specific solutions like adding a download function and creating unique payment methods like vouchers that can be bought at retailers and unique subscription services like daily and weekly subscriptions.

The respondents agreed that technopreneurs need to attract new customers. High earning and internet savvy customers will be the easiest to attract because they would have already been aware of the service and have been using different variation of online video services like VOD. However, the respondents warned that attracting the next level of clients which are the late majority will be difficult. The respondents were optimistic about the technopreneurs ability to eventually attract these customers, however the respondents warned online

video service providers would need to invest large amount of money of research, development, educational campaigns and marketing.

The respondents also stressed the importance of online video services providers in improving the general infrastructure around this industry. According to the technopreneurs as more players enter the industry the more competitive the industry becomes, which will result in an increased demand. The respondents agreed that the increase in demand will put pressure on the government to have better internet infrastructure. Furthermore, this increased demand will result in an overall improvement in the kind of internet that service providers.

#### 4.13 Conclusion

In this chapter, the data from the quantitative and qualitative research was presented. The summary of the hypotheses indicates that relative advantage, compatibility, and observability have a significant relationship with online video adoption. The hypotheses of complexity, trialability and affordability were however not supported by the data.

**Table 16: Summary of Hypotheses**

	Independent variable	Dependent variable	$\beta$	t-vale	P-vale	Result
H1	Relative Advantage	Satisfaction	.243	3.640	.000	Supported

H2	Complexity	Satisfaction	.018	.295	.768	Not Supported
H3	Compatibility	Satisfaction	.371	5.321	.000	Supported
H4	Trialability	Satisfaction	-.029	-.472	.637	Not Supported
H5	Observability	Satisfaction	.133	2.176	.031	Supported
H7	Affordability	Satisfaction	-.098	-1.655	.099	Not Supported

Furthermore, qualitative research was performed through interview questions, which were used to complement the quantitative part of the research research. The qualitative research was performed specifically to further investigate the role of the technopreneur in the process of adoption and diffusion of new innovative products. As explained above, technopreneurs have a particularly significant role to play as they they are able to influence the factors of adoption. Furthermore, the South African online video services industry is still nascent, and the technopreneurs in this industry have the important role of steering the industry in a direction that will ensure growth and sustainability. H6 is not included in the table because it is the dependent variable and it is used to measure the independent variable.

## **5 CHAPTER 5: DISCUSSION OF THE RESULTS**

### **5.1 Introduction**

The aim of this chapter is to discuss the results presented in Chapter 4. The discussion of results chapter will be carried out by discussing each of the hypotheses and research question individually. A conclusion will then follow and wrap up the the chapter.

### **5.2 Demographic profile of respondents**

The demographic of the respondents can be separated into those that were from the survey questionnaire and those that were interviewed in the face to face interview. In the survey questionnaire we had 205 respondents of which 102 were men and 203 were women. The data was collected from individuals between the ages of 18 and 40 however the majority of respondents we below the age of 30.

The interview questions consist of individuals that have started and online video services business or those that had been working or researching the company for a period of time. The individuals included CEO's, GM's, Heads of departments as well as senior researchers in the industry.



### 5.3 Discussion pertaining to Hypothesis 1:

#### **Relative advantage will have a positive effect on Online Video adoption**

Independent variable	Relative Advantage
Dependent variable	Satisfaction
$\beta$	.243
t-value	3.640
P-Value	.000
Result	Supported

According to the findings in this research it can be concluded that relative advantage has a positive effect on Online Video adoption, this hypothesis is supported by the data. The term relative advantage indicates the degree to which a new innovation is observed to be superior to its precursor (Gary & Benbasat, 2001). This means that possible adopters feel that for an online service provider to be successfully adopted the products needs to be better than previous products.

It is important to note that certain segments would value this attribute more than others. Early adopters and early majority consumers often value the status of the new products. However, for laggards, the perceived status is less important for them. (Sahin, 2006). Because the majority of the of the survey respondents were under the age of 30, they might value their social status and therefore it

would be important that a new product or service is able to create value and is better than the previous version of the product.

Online Video Service providers need to understand customers needs before creating their product, this will ensure that customers see the relative advantage for their product. Online Video Services are in many ways better than previous products, which is pay TV, which mostly needs the consumer to follow their schedule. With online video services, the customer is able to conveniently watch what ever programing, at any time using more than one device.

Relative advantage depends on the perceptions of a group of users and it is measured by considering economic advantage, social prestige, convenience and satisfaction that the users can derive from a particular product (Robinson, 2012). In a country like South Africa where reliable internet services are generally only accessible to those in the top middle class, having Online Video Services can allow users to enjoy a sense of social prestige as affording these services may make people perceive you as successful. It is therefore concluded that relative advantage has a positive effect on Online Video adoption.

#### **5.4 Discussion pertaining to Hypothesis 2:**

**H2: will have a negative effect on Online Video adoption.**

Independent variable	Complexity
Dependent variable	Satisfaction
$\beta$	.018
t-value	.295

P-Value	.768
Result	Not Supported

An innovation's complexity refers to the level to which an innovation is perceived as being difficult or complicated to use (Gary & Benbasat, 2001). Complexity in this research study was found to have an insignificant effect on online video services adoption. This result is unanticipated and is contrary to findings of some prior studies like (Jahangir & Begum, 2008). However, it is consistent with (Wang, Wang, Lin, & Tang, 2003) a study on the adoption of internet banking. The study suggested that there is no significant impact of complexity or ease of use on the behavioural intention of adopters to use internet banking.

It can also be inferred that since the majority of the respondents in the study are below 30 years old, it is possible that they absorb internet-based products more readily and therefore would not find these products complex. Complexity in this case would not have a big impact on the decision of whether this group of adopters use the product or not. Because younger people are more aware of new innovations, they may have already encountered many other complex technologies, and consequently they have a good foundation on how to use, and interact with complex technological products.

The qualitative aspect of the research also determined that early adopters are often those who do not have have issues with the complexity of the product. However, those consumers that are in the early majority or laggards need entrepreneurial firms to be creative with their marketing to be urged to adopt.

When launching new technology products, technopreneurs need to first serve those innovators and early adopters because they are mostly not risk averse and they do not mind spending money on products just so they have a good social and they are viewed as being a leader by the peers.

However, to maximise profits, technopreneurs will need to penetrate the mass market. In this market firms will need to be creative with their marketing messaging and will have to invest a lot of money in educating potential customers. In the South African market, it could be important to have product features like downloading which would reduce costs for the customer also, it would allow the customer the ability to download content at work or wherever they have access to stable or free internet and watch the content at home.

## 5.5 Discussion pertaining to Hypothesis 3:

**Compatibility will have a positive effect on Online Video adoption**

Independent variable	Compatibility
Dependent variable	Satisfaction
$\beta$	.0371
t-value	5.321
P-Value	.000
Result	Supported

Compatibility refers to the level to which an innovation is observed to be suitable with the existing values, needs and previous experiences of potential adopters (Gary & Benbasat, 2001). In this research study, compatibility has been found to be a significant determinant for predicting online video services adoption. This result is similar to the results in previous studies like Sahin (2006) who determined that compatibility is a significant factor in a customer's decision to adopt online video services. This result also implies that Online Video Services have a good fit with the manner in which customers view their content and is suitable with their lifestyle, and therefore they are more likely to adopt online video services.

After the qualitative research, it could be determined that compatibility is extremely important. To build compatible products, firms need to understand what their customer needs and values are. One of the most important factors in creating compatible products for a South African audience is to create content that is local and is in local languages. This not only satisfies your customers but differentiates local online video service providers to international providers who often concentrate on providing Hollywood content.

Local providers have to also think about how their customers will have access to these services. Online video services in South Africa have had to get creative, like offering a download function which allows customers to download content in places where they have internet access. Adding functionalities like downloading make the product more comparable, make it easier for customers to choose to adopt Online Video Services.

## 5.6 Discussion pertaining to Hypothesis 4:

### **Trialability will have a positive effect on Online Video adoption**

Independent variable	Trialability
Dependent variable	Satisfaction
$\beta$	-.029
t-value	-472
P-Value	.637
Result	Not Supported

In this research study, Trialability was found to be to have an insignificant consequence on online video service adoption. This result supports other research findings like Sahin (2006), who found that trialability was insignificant in the adoption of mobile banking. Trialability refers to the degree to which potential customers are able to experience or experiment with the innovation before they decide to buy the new product or service (Gary & Benbasat, 2001).

Normally, the trial is the period that firms would give their customers to test products in order to drive awareness (Sahin, 2006). Possibly, this result was influenced by the fact that the majority of the sample were under the age of 30, the majority also have a post graduate degree and 30% have a household income of R40,000 or more. Also, according to the demographic profile, 58% of

this sample has used online video services for at least 3 years.

From these results, it can be inferred that this sample may have used online video services in different forms, whether DStv online, Youtube, or have used products like Netflix when they had travelled overseas. Having used these products before they might have reduced their uncertainty and they then don't associate risk with this product.

The interviews also concurred with the survey results. They indicated that online video service providers had started having pressure from consumers. Furthermore, because internet products have no geographical restrictions many customers were using American online video services illegally in South Africa. This means that in effect, many customers especially the early adopters don't need to trial these products. However, a study with a larger population that is not restricted to metropolitan areas like Gauteng could yield different results.

## **5.7 Discussion pertaining to Hypothesis 5:**

### **Observability has a positive effect on Online Video adoption**

Independent variable	Observability
Dependent variable	Satisfaction
$\beta$	.133
t-value	2.176
P-Value	.031
Result	Supported

In this research, it was determined that observability has a positive effect on online video services. This results means that observability has a significant effect on online video services. According to Gary and Benbasat, (2001) Observability refers to the degree to which the results of the innovation are observable by others. Furthermore, observability can be divided into two concepts, the first is visibility and the second is result demonstration. (Al-Jabri & Sohail , 2012).

In the case of online video services as with many other internet-based services, customers are able to experience the benefits of the product immediately. Customers are able to enjoy the product on many different devices.

The more visible the results of an innovation are the lower the uncertainty for the user, this also encourages discussion about the new idea as friends, family and neighbours often need information about the new product (Robinson, 2012). The qualitative responses concurred with this literature and indicated that most of the conversation around new products happens on social media. This makes it very important for an online video services provider to have a strong social media presence and make sure that accurate information is being communicated to their current and potential customers.



## 5.8 Discussion pertaining to Hypothesis 7:

### **Affordability will have a negative effect on online Video adoption**

Independent variable	Affordability
Dependent variable	Satisfaction
$\beta$	-.098
t-value	-1.655
P-Value	.099
Result	Not Supported

Affordability can be described as the degree to which potential customers are willing and able to pay the price that is being asked (Nezakati, Ali, & Asgari, 2012). The results of this research study established that affordability is not significant in online video service adoption. This result is contrary to past research including that of Nezakati, Ali, & Asgari (2012) which found affordability to be to be significant in the purchasing intention of females buying organic food in Malaysia.

Past research has recognised that the use of technology is connected to socio-economic development. In developing countries, the vicious cycle between technology affordability and non-adoption hinders the acceptance of ICTs (Shambare , 2014).

The sample in this research included individuals between the ages of 18 to 40 years old, mostly living in metropolitan areas in Gauteng. Furthermore, many of the respondents have a post graduate degree, have a household income of more than R31,000 and are experienced professionals. From the demographic profile, it can be assumed that the majority of the sample are middle class. Also 58% of the sample had used online video services for at least 3 years which means they have access in some form to stable internet.

According to the qualitative research, affordability can be a barrier to entry for most potential adopters. Technopreneurs in this case would need to segment their customers very carefully. Many of the technopreneurs interviewed identified their target market as those in the middle and top income households. They also indicated that from the research they have done, many costumers who take up online video services normally use it as a complimentary service to Pay-TV. Also, the biggest price barrier in online video services is the cost and availability of stable internet and this is mostly available in market areas. These conditions could be the reasons why customers did not perceive the cost of online video services as a significant factor in the adoption of online video services.

## **5.9 Discussion pertaining to Research Question 2:**

### **What is the role of the technopreneur in the diffusion of Online Video in South Africa?**

According to Shane & Venkataraman, (2000) entrepreneurship can be defined as the discovery and exploitation of opportunities. This meaning that technopreneurs would have the sole responsibility of making sure that they source all resources needed to ensure that a new product is successful. In the case of online video services technopreneurs will need to examine factors discussed above like relative advantage, complexity, compatibility, trialability, observability, and affordability, to ensure that they maximise the chances of successful adoption of online video services.

In the survey questionnaire the respondents were asked about who had recommended the use of online video services, the largest proportion of respondents were prompted to use online video services from social media (45%), while 31% had the services being recommended by friends of family. The survey proves that social media, which can be described as the modern day word of mouth, has become an important part of disseminating information within the market.

An entrepreneur's innovativeness and character play an important role in the adoption of innovation process (Marcati, Guido, & Peluso, 2008). South African technopreneurs in the online video services industry play a very important role of trying to create a product that is suitable for the South African market which is

different to the international market. South African technopreneurs need to find solutions to South African issues like payments, internet access and internet literacy. As mentioned before, it will be easy to attract the innovators and early adopters. However, attracting the mass market will be a challenge.

It is important for technopreneurs in this industry to have strategies on how they will attract the mass market because that is when they will maximise profits. Entrepreneurs are also very important for economic progress as they play an important role in contributing to the quality and future of a certain industry (Soriano & Huanng, 2013). Furthermore, Soriano and Huanng, (2003) describe how entrepreneurs inspire competitiveness and aid job creation.

This sentiment about the role of entrepreneurship was further reinforced by the interview respondents as they described how creating a demand for online video services would lead to a development of the whole ecosystem. The more demand is created the more technopreneurs can enter the industry. This will lead to internet providers upgrading their infrastructure, which will then increase the occurrence of internet-based products and services.

## **5.10 Conclusion**

The aim of this chapter was to discuss the results of the research study. In launching innovations, the technopreneur's main aim is to satisfy their customers needs. Satisfaction is the dependent variable for Information Technology success for two reasons. Firstly, satisfaction has a level of face

validity and secondly, satisfaction is broadly used as a way to measure success and post adoption quality for mobile services (Al-Jabri & Sohail , 2012).

To launch online video services technopreneurs need to invest a lot of resources in research to create products that satisfy the needs of potential customers. As discussed above, if South African technopreneurs want to create good products, then they need to make sure that they create products that are superior to existing products like Pay-TV and international online video services like Netflix and Hulu.

## **6 CHAPTER 6: CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS**

### **6.1 Introduction**

In this chapter, the consolidation of the research results, conclusions of the study and implications on the role of the technopreneur will be presented. The chapter will end with a presentation of recommendations for future research.

### **6.2 Conclusions of the study**

As stipulated in the previous chapters, the purpose of this study is to investigate factors that affect the diffusion of online video services and the role that the technopreneur has in ensuring that these services are diffused successfully. Furthermore, the research intended to answer the following research questions:

1. What are the factors that influence the adoption of online video content in the South African market?
2. What is the role of the technopreneur in the diffusion of Online Video in South Africa?

To investigate the the factors that influence online video adoption, a survey was developed and distributed online. Additionally, interviews were conducted to investigate how technopreneurs influence the factors namely, relative advantage, complexity, compatibility, trialability, observability and affordability. In the quantitative research it was concluded that relative advantage,

compatibility and observability were supported by the research whereas, complexity, trialability and affordability were not supported by the research.

In this research, it was concluded that technopreneurs have a very unique opportunity as well as a responsibility to ensure that the online video services industry becomes a success. The technopreneur would need to look at the hindrances like unreliable and high cost internet as well as the risk averseness of some potential and find ways to overcome that.

### **6.3 Recommendations**

According to Miller & Garnsey, (2000), many authors have failed to provide an integrated view of how entrepreneurs are able to influence technology diffusion. The diffusion of innovation process is influenced significantly by entrepreneurial capabilities as well as their ability to match the correct resources with the correct opportunities. As a result of the research the following recommendations can be determined:

1. There is limited amount research that looks at the role of the entrepreneur in the adoption of new innovations. The research on the diffusion of innovation concentrates mostly on the potential adopters and how they experience these factors but fail in many instances to investigate how entrepreneurs can influence the potential adopter's perception towards these factors.

2. Research on the adoption of new innovations is tremendously important, especially in a country like South Africa, where the aim is to encourage entrepreneurship, particularly in the technology sector since business growth in this sector can be large and create economic growth as well as create long term quality employment.
3. For South African online video services to survive, they need to get support and the by from internet service providers. These providers could have important insights and also this could allow for collaborations that lower pricing for customers.
4. From this research, it can also be recommended that businesses need to collaborate with universities in order to rigorously research the subject of adoption of new innovations. The collaboration could uncover valuable information that could aid in the success of local technopreneurs.

#### **6.4 Suggestions for further research**

This study used convenience sampling technique for data collection. Thus the findings cannot be generalized because the majority of the sample size is young respondents, between 18 and 30 years old. Online video service at this point are still relatively new and are considered as immature.

Over the duration of this study a review of diffusion of technology research has revealed that the literature in this topic does not adequately provide a cohesive explanation of how and why propagating entrepreneurs are able to successfully



influence technology diffusion (Miller & Garnsey , 2000). As a logical continuation of that which has been achieved through this research, it would be interesting to:

- Thoroughly investigate the role of the entrepreneur in the sector, because such persons are so few in number, their perspective could only be appreciated in a preliminary manner for the purpose of this study.
- Investigate the behavior of South African internet customers and what their buying behaviors are, more especially looking at mass market adopters.

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# APPENDIX A

## Research instrument A

### **Part 1: Demographics**

**1. What is your gender?**

- ☐ Male (1)
- ☐ Female (2)

**2. How old are you?**

- ☐ 18 - 25 years old (1)
- ☐ 26 - 30 years (2)
- ☐ 31 - 35 years old (3)
- ☐ 36 - 40 years olds (5)

**3. What is your highest educational qualification?**

- ☐ High School (1)
- ☐ Diploma (2)
- ☐ University Degree (3)
- ☐ Post Graduate Qualification (4)

**4. What is your monthly household income?**

- ☐ Less than R10,000 per month (1)
- ☐ R11,000 - R20,000 (2)
- ☐ R21,000 - R30,000 (3)
- ☐ R31,000 - R40,000 (4)
- ☐ R40,000 and above (5)

**5. What is your occupation?**

- ☐ Student (1)
- ☐ Employed - Entry Level (2)
- ☐ Employed - Experienced Professional (3)
- ☐ Self Employed (4)

### **Part 2: Online Video Usage**

**6. Which ones of the devices below do you have in your household?**

**Choose as many as you need to**

- ☐ iOS Smart Phone (1)
- ☐ Android Smart Phone (2)
- ☐ Tablet (3)
- ☐ Apple Mac (4)
- ☐ Windows Laptop (5)

- ☐ Smart TV (6)
- ☐ Set Top Box (6)
- ☐ Apple TV (7)
- ☐ Gaming Console (8)
- ☐ if other, please specify (9) \_\_\_\_\_

**7. How do you access internet in your household?**

- ☐ Prepaid Mobile data (1)
- ☐ Contract Mobile data (2)
- ☐ Capped ADSL (3)
- ☐ Uncapped ADSL (4)

**8. Have you ever used an Online Video Service?**

- ☐ Yes (1)
- ☐ No (2)

**9. If you answered yes to question 8, Which Online Video Service have you used?**

**Choose as many as you need to**

- ☐ Netflix (1)
- ☐ Hulu (2)
- ☐ Vidi (3)
- ☐ MTN Front Row (4)
- ☐ ShowMax (5)
- ☐ Altech Node (6)
- ☐ Youtube (7)
- ☐ if other, please specify the name of the service (8) \_\_\_\_\_

**10. How long have you been using Online Video Services?**

- ☐ Less than 6 months (1)
- ☐ 6 months and < 1 year (2)
- ☐ 1 to 3 years (3)
- ☐ More than 3 years (4)

**Influence of the Entrepreneur**

**11. Do you think that South African Online Video Services are of the same quality as International services (ie Netflix or Hulu)?**

- ☐ Yes (1)
- ☐ No (2)

**12. Who initiated/inspired/recommended your adoption of online video services?**

- ☐ The entrepreneur (1)
- ☐ Advertising from online video companies (2)
- ☐ Friends or Family (3)
- ☐ Social Media (4)
- ☐ if other (9) \_\_\_\_\_

### **Part 3: Diffusion and Adoption survey**

#### **13 .Relative Advantage:**

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Online Video Services are a convenient way to watch movies and series (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Video Services allow me easy access to my favourite movies and series. (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Video Services give me greater control over what movies and series I watch (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Video Services are useful for scheduling movies and series (4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### **14. Compatibility**

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Online Video Services fit well with the way I like to view my video content (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to try new technology (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to adopt new innovation (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Video Services are compatible with my lifestyle (4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### **15. Observability**

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Online Videos can be	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

accessed anytime and anywhere in South Africa (1)					
With Online Video Services I have no waiting time for watching movies and series (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Video Services can be accessed when abroad (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can see the effect of my Online Video usage immediately (4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 16. Complexity

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Using Online Video Services require a lot of mental effort (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using Online Video Services require technical skills (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using Online Video Services can be frustrating (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 17. Triability

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
I want to try an online video service for for at least one month (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I want to use Online Videos on a trial basis to see what they can do for me (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 18. Satisfaction

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree	Agree (4)	Strongly Agree (5)
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			(3)		
I would strongly recommend Online Video Services to others (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think that I made the correct decision by using Online Video Services (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am satisfied with the content that Online Video Service Providers provide (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am satisfied with the service I have received from Online Video service providers (4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, I was satisfied with Online Video services (5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 19. Affordability

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
The price of Online Video Services is high (excluding the cost data) (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The price of Online Video Services is High (including the cost data) (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Price is the most important factor when it comes to subscribing to online video services. (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, the price of online Video services is reasonable. (4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## **APPENDIX B**

### **Qualitative questionnaire**

1. What can technopreneurs do to ensure that they create relative advantage for their potential adopters?
2. How can technopreneur make the product less complex?
3. How do entrepreneurs ensure that the product is comparable to the consumer's values and needs?
4. How do entrepreneurs ensure Triability for online video services?
5. How do entrepreneurs ensure observability for online video services?
6. How do entrepreneurs influence affordability for the product?
7. How do entrepreneurs ensure satisfaction for customers?

## **APPENDIX C**

### **Consistency matrix**

Research problem stated here					
Sub-problem	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
To understand how relative advantage affects the adoption of Online video	(Atkinson , 2007) (Sahin, 2006) (Al-Jabri & Sohail , 2012)	Relative advantage will have a positive effect on Online Video adoption	Relative advantage: Question 1-4	Interval data Ordinal data	-Factor analysis -Correlation analysis -Multiple regression -Descriptive statistics - mean, standard deviation and total correlations. -Cronbach's alpha

Research problem stated here					
Sub-problem	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
To understand how Complexity affects Online Video adoption	(Klopping & McKinney, 2004) (Nganga & Mwachofi, 2013) (Atkinson , 2007) (Sahin, 2006) (Al-Jabri & Sohail , 2012)	Complexity will have a negative effect on mobile Online Video adoption	Complexity: Question 14-16	Interval data Ordinal data	-Factor analysis -Correlation analysis -Multiple regression -Descriptive statistics - mean, standard deviation and total correlations. -Cronbach's alpha

Research problem stated here					
Sub-problem	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
To understand how Compatibility affects Online Video adoption.	(Klopping & McKinney, 2004) (Nganga & Mwachofi, 2013) (Atkinson , 2007) (Sahin, 2006) (Al-Jabri & Sohail , 2012)	Compatibility will have a positive effect on Online Video adoption.	Compatibility: Question 5 -9	Interval data Ordinal data	-Factor analysis -Correlation analysis -Multiple regression -Descriptive statistics - mean, standard deviation and total correlations. -Cronbach's alpha

Research problem stated here					
Sub-problem	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
To understand how observability affects the adoption of Online video	(Atkinson , 2007) (Sahin, 2006) (Al-Jabri & Sohail , 2012)	Observability will have a positive effect on Online Video adoption	Observebility: Question 10 - 13	Interval data Ordinal data	-Factor analysis -Correlation analysis -Multiple regression -Descriptive statistics - mean, standard deviation and total correlations. -Cronbach's alpha

Research problem stated here					
Sub-problem	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
To understand how triability affects the adoption of online video	(Klopping & McKinney, 2004; Szirma, Naude, & Goedhuys, 2011; Warkov & Meyer, 1982) (Nganga & Mwachofi, 2013) (Atkinson , 2007) (Sahin, 2006) (Al-Jabri & Sohail , 2012)	Triability will have a positive effect on Online Video adoption	Triability: Question 17- 18	Interval data Ordinal data	-Factor analysis -Correlation analysis -Multiple regression -Descriptive statistics - mean, standard deviation and total correlations. -Cronbach's alpha



Research problem stated here					
Sub-problem	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
To understanding how satisfaction affects the adoption on online video services.	(Sahin, 2006)	Satisfaction will have a positive effect on Online Video adoption	Satisfaction Question 19-23	Interval data Ordinal data	-Factor analysis -Correlation analysis -Multiple regression -Descriptive statistics - mean, standard deviation and total correlations. -Cronbach's alpha

Research problem stated here					
Sub-problem	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
To investigate how the affordability affects the adoption on online video	(Ramani , SadreGhazi , & Duysters , 2012) (Sahin, 2006)	Affordability will have a negative effect on online Video adoption	Affordability: Question 24-26	Interval data Ordinal data	-Factor analysis -Correlation analysis -Multiple regression -Descriptive statistics - mean, standard deviation and total correlations. -Cronbach's alpha

Research problem stated here					
Sub-problem	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
Evaluating how entrepreneurs could successfully commercialise Online Video services.	(Miller & Garnsey , 2000) (Lal , 1999) (Lai & Lin , 2012) (Huarngb & Kima, 2011) (Yu , Huarng, & Lai, 2015)	What resources are necessary for a successful diffusion of Online Video services? Does company size have an influence in the successful diffusion of Online video services?	Interviews with Online video entrepreneurs	Interval Data Nominal data	Thematic analysis

Research problem stated here					
Sub-problem	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
To understand the role of the entrepreneur in the adoption of online video services.	(Lal , 1999) (Lai & Lin , 2012) (Huarngb & Kima, 2011) (Yu , Huarng, & Lai, 2015) (Miller & Garnsey , 2000)	How do entrepreneurs influence the diffusion of innovation process? Can the entrepreneur influence the speed at which Online video services are adopted?	Interviews with Online video entrepreneurs	Interval Data Nominal data	Thematic analysis

